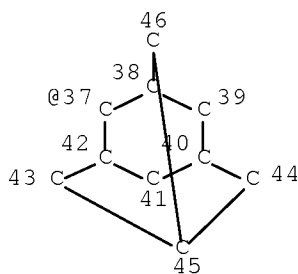
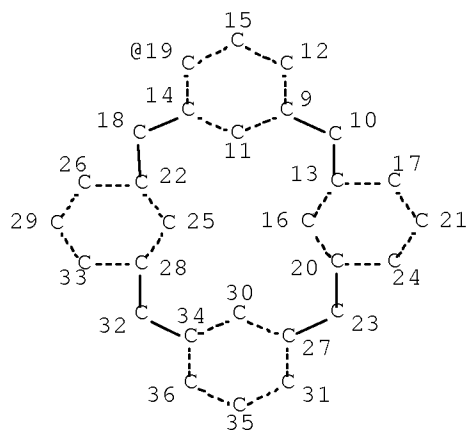


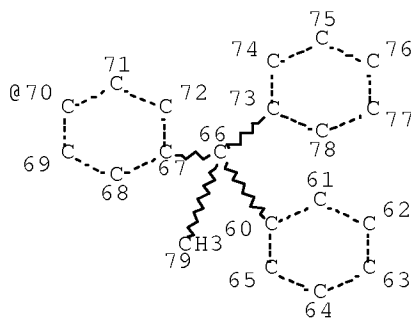
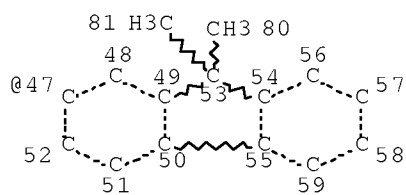
=&gt; d que 150

L2 7 SEA FILE=REGISTRY ABB=ON PLU=ON (125748-07-4/BI OR  
 108-46-3/BI OR 280-57-9/BI OR 5292-43-3/BI OR 625122-37-4/B  
 I OR 66003-78-9/BI OR 75-07-0/BI)  
 L10 STR



G1 82

Page 1-A



Page 2-A

VAR G1=19/37/47/70

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

NUMBER OF NODES IS 74

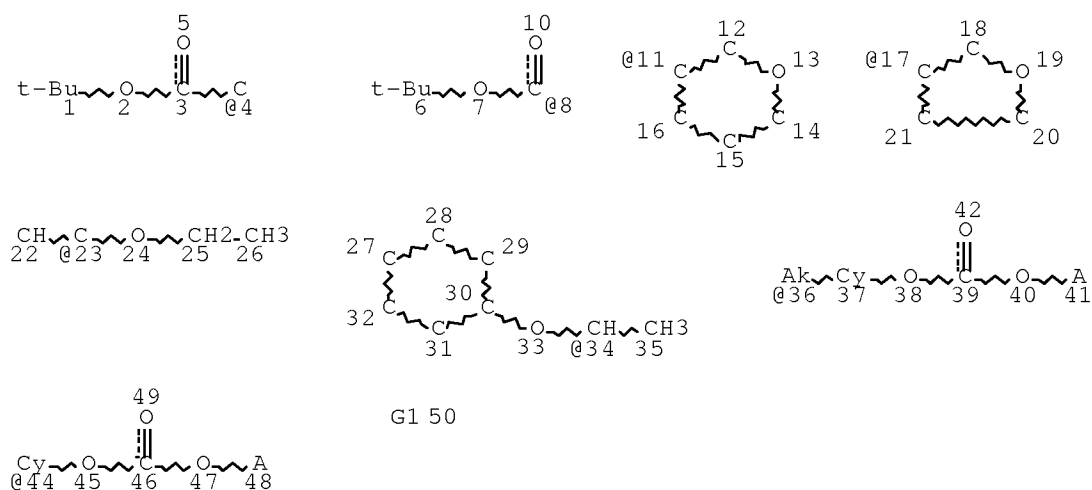
STEREO ATTRIBUTES: NONE

L12 163571 SEA FILE=REGISTRY SSS FUL L10

L13 2 SEA FILE=REGISTRY ABB=ON PLU=ON L12 AND L2

L16 STR

10/594,282



G1 50

VAR G1=T-BU/4/8/11/17/23/34/36/44

NODE ATTRIBUTES:

NSPEC IS RC AT 41

NSPEC IS RC AT 48

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

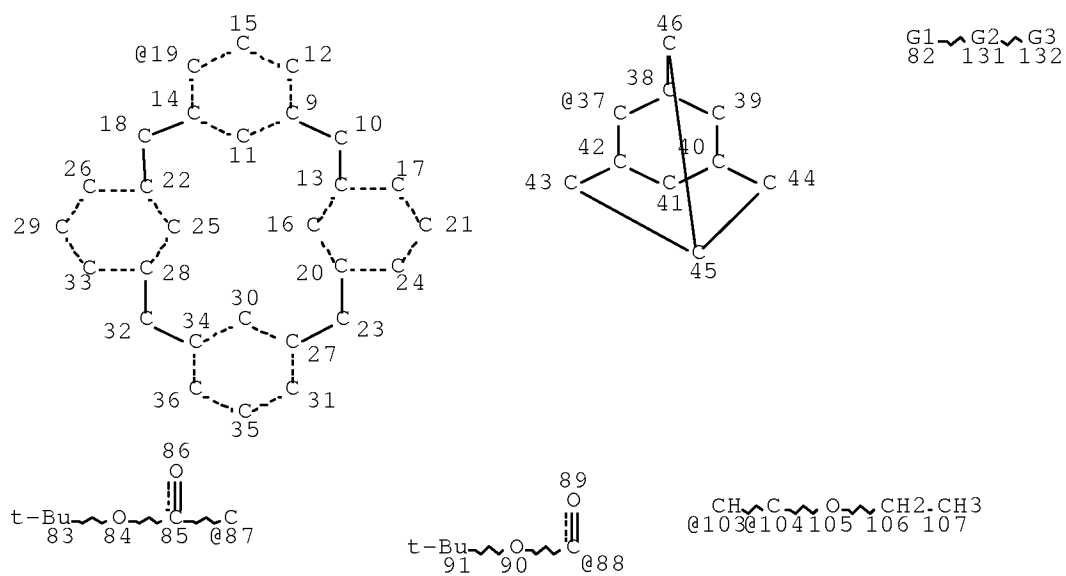
RSPEC I

NUMBER OF NODES IS 48

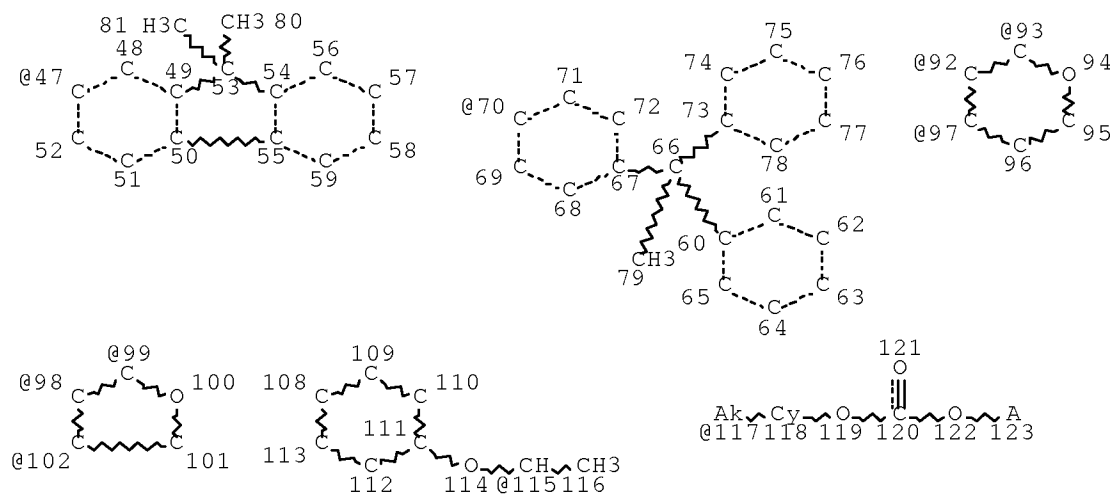
STEREO ATTRIBUTES: NONE

L18 22654 SEA FILE=REGISTRY SUB=L12 SSS FUL L16  
 L19 21621 SEA FILE=REGISTRY ABB=ON PLU=ON L18 NOT M/ELS  
 L20 20976 SEA FILE=REGISTRY ABB=ON PLU=ON L19 NOT P/ELS  
 L21 7461 SEA FILE=REGISTRY ABB=ON PLU=ON L20 NOT N/ELS  
 L22 449 SEA FILE=REGISTRY ABB=ON PLU=ON L21 AND SI/ELS  
 L23 7012 SEA FILE=REGISTRY ABB=ON PLU=ON L21 NOT L22  
 L24 5505 SEA FILE=HCAPLUS ABB=ON PLU=ON L23  
 L25 82 SEA FILE=HCAPLUS ABB=ON PLU=ON L13  
 L29 405 SEA FILE=HCAPLUS ABB=ON PLU=ON L24(L) (PHOTORESIST? OR  
 PHOTO RESIST?) (3A) (COMPOSITION? OR FORMULATION? OR  
 MIXTURE?)  
 L39 STR

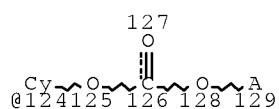
10/594,282



Page 1-A



Page 2-A



Page 3-A

VAR G1=19/37/47/70

REP G2=(0-5) A

VAR G3=87/88/104/103/92/97/93/99/98/102/115/117/124

NODE ATTRIBUTES:

NSPEC IS RC AT 123  
NSPEC IS RC AT 129  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RSPEC I  
NUMBER OF NODES IS 123

## STEREO ATTRIBUTES: NONE

L41 791 SEA FILE=REGISTRY SUB=L12 SSS FUL L39  
L42 506 SEA FILE=HCAPLUS ABB=ON PLU=ON L41  
L43 32 SEA FILE=HCAPLUS ABB=ON PLU=ON L42 AND L29  
L44 20 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND (PHOTORESIST? OR  
PHOTO RESIST?) (3A) (COMPOSITION? OR FORMULATION? OR  
MIXTURE?)  
L45 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L44 AND RADIATION  
RESIST?  
L46 0 SEA FILE=HCAPLUS ABB=ON PLU=ON L43 AND RADIATION  
RESIST?  
L47 51 SEA FILE=HCAPLUS ABB=ON PLU=ON (L43 OR L44 OR L45 OR  
L46)  
L48 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L47 AND (ULTRAVIOLET? OR  
ULTRA VIOLET? OR UV OR U VIOLET? OR UVIOLET?)  
L49 15 SEA FILE=HCAPLUS ABB=ON PLU=ON L47 AND LITHOG?  
L50 51 SEA FILE=HCAPLUS ABB=ON PLU=ON (L47 OR L48 OR L49)

=> d l50 1-51 ibib ed abs hitstr hitind

L50 ANSWER 1 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2008:1040174 HCAPLUS Full-text  
DOCUMENT NUMBER: 149:319358  
TITLE: Modified phenol-containing positive  
photoresist compositions and  
method for forming patterns thereof  
INVENTOR(S): Shiono, Hirotooshi; Suzuki, Takako  
PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 61pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2008197387	A	20080828	JP 2007-32572	20070213
PRIORITY APPLN. INFO.:			JP 2007-32572	20070213

ED Entered STN: 28 Aug 2008

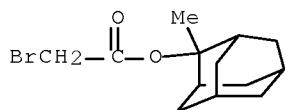
AB In the pos. photoresist compns. comprising (A) main components with alkaline solubility increased by acids and (B) radiation-sensitive acid generators, the main components A contain  $\geq 2$  kinds of compds. with mol. weight 700-2500 prepared by substitution of phenolic H atoms of phenols wholly or partially with acid-eliminating solubility-suppressing groups. The compns. may contain (D) N-containing organic compds. The compns. are applied on supports, exposed, and developed to give patterns with high resolution and lowered roughness.

IT 625122-37-4, 2-Methyl-2-adamantyl bromoacetate

(in preparation of main components; modified phenol-containing pos. photoresist compns. for forming high-resolution and low-roughness patterns)

RN 625122-37-4 HCAPLUS

CN Acetic acid, 2-bromo-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester (CA INDEX NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT Positive photoresists

(modified phenol-containing pos. photoresist compns. for forming high-resolution and low-roughness patterns)

IT Phenols, preparation

(with acid-eliminating groups, main components; modified phenol-containing pos. photoresist compns. for forming high-resolution and low-roughness patterns)

IT 923568-10-9P 930304-19-1P 1020206-44-3P 1020206-45-4P

(in preparation of main components; modified phenol-containing pos. photoresist compns. for forming high-resolution and low-roughness patterns)

IT 95-87-4, 2,5-Dimethylphenol 3046-82-0 5292-43-3, tert-Butyl bromoacetate 34040-64-7, Methyl 4-chloromethylbenzoate 177609-29-9, 2-Chloromethoxyadamantane 625122-37-4, 2-Methyl-2-adamantyl bromoacetate

(in preparation of main components; modified phenol-containing pos. photoresist compns. for forming high-resolution and low-roughness patterns)

IT 930304-21-5P 930304-23-7P 1020539-45-0P

(main components; modified phenol-containing pos. photoresist compns. for forming high-resolution and low-roughness patterns)

IT 1116-76-3, Tri-n-octylamine

(modified phenol-containing pos. photoresist compns. for forming high-resolution and low-roughness patterns)

IT 144317-44-2, Triphenylsulfonium nonafluorobutanesulfonate

(radiation-sensitive acid generators; modified phenol-containing pos. photoresist compns. for forming high-resolution and low-roughness patterns)

L50 ANSWER 2 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2008:886822 HCAPLUS Full-text

DOCUMENT NUMBER: 149:187328

TITLE: Positive photoresist composition and method for pattern formation using the same

INVENTOR(S): Shiono, Taiju; Suzuki, Takako

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 49pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2008170784	A	20080724	JP 2007-4583	20070112
PRIORITY APPLN. INFO.:			JP 2007-4583	20070112

ED Entered STN: 24 Jul 2008  
GI

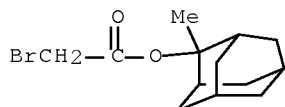
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The composition contains an acid-sensitive alkali-solubilizable compound and a photoacid generator, wherein the acid sensitive compound is a phenol compound I(R101-107 = C1-10 alkyl, aromatic hydrocarbon; Z1-2 = H, -R113-CO-OH; a, na = integer  $\geq 1$ ; n2, n7 = integer  $\geq 0$ ; a+b1+n2+n7 $\leq 5$ ; b = integer  $\geq 1$ ; n3, n4 = integer  $\geq 0$ ; b+n3+n4 $\leq 4$ ; c = integer  $\geq 1$ ; n5, n6 = integer  $\geq 0$ ; c+n5+n6 $\leq 4$ ; A = alkylene, alicyclic group; R113 = -(CH2)e-, methine phenylidene), C1-10 alkyl-substituted phenol compound, or phenol compound having acid-sensitive solubility controlling substituent for phenols and wherein the content of the acid generator is  $\geq 10$  % of the acid-sensitive compound The composition provides high resolution pattern while generating high acid concentration

IT 625122-37-4  
(acid-sensitive alkali-solubilizable compound in pos. photoresist composition)

RN 625122-37-4 HCAPLUS

CN Acetic acid, 2-bromo-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester (CA INDEX NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT Photolithography  
Positive photoresists  
(pos. photoresist composition and method for pattern formation using the same)

IT 95-87-4, 2,5-Dimethylphenol 3046-82-0,  
5,5'-Methylenebis[salicylaldehyde] 5292-43-3, tert-Butyl  
bromoacetate 625122-37-4  
(acid-sensitive alkali-solubilizable compound in pos. photoresist composition)

IT 923568-10-9P 930304-19-1P  
(acid-sensitive alkali-solubilizable compound in pos. photoresist composition)

IT 1040381-25-6P  
(acid-sensitive alkali-solubilizable compound in pos. photoresist composition)

L50 ANSWER 3 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2008:829079 HCAPLUS Full-text  
 DOCUMENT NUMBER: 149:164126  
 TITLE: Positive-type resist composition and method for  
 formation of resist pattern  
 INVENTOR(S): Shiono, Daiju; Suzuki, Takako  
 PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 99pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2008081731	A1	20080710	WO 2007-JP74521	20071220
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM JP 2008164904 A 20080717 JP 2006-353933 20061228 PRIORITY APPLN. INFO.: JP 2006-353933 A 20061228				

ED Entered STN: 10 Jul 2008

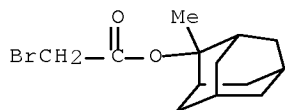
AB The resist composition comprises a component (A1) produced by substituting some or all of H atoms in hydroxy groups in either a specified phenol compound or a substituted phenol compound by an acid-labile dissoln.-inhibiting group, wherein the substituted phenol compound is prepared by substituting one or some of H atoms in hydroxy groups in the phenol compound by a C1-10 alkyl group; a resin component (A2) comprising a constituent unit having an acid-labile dissoln.-inhibiting group and whose alkali solubility can be increased by the action of an acid; and an acid generator component (B) which can generate an acid upon being irradiated with a radioactive ray. The resist composition is capable of producing high-resolution patterns with reduced line edge roughness.

IT 625122-37-4

(preparation of phenol compds. for pos.-type resist compns. for forming high-resolution patterns)

RN 625122-37-4 HCAPLUS

CN Acetic acid, 2-bromo-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester (CA INDEX NAME)



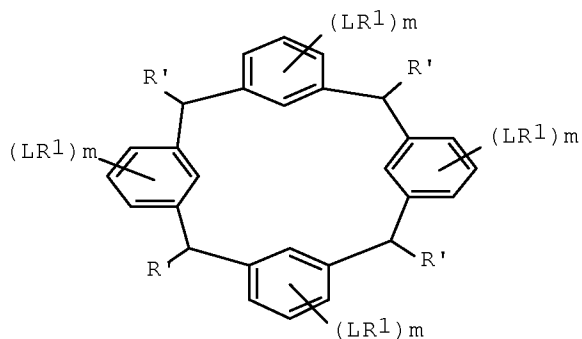
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 25  
 IT Positive photoresists  
 (pos.-type resist compns. for forming high-resolution patterns)  
 IT 95-87-4, 2,5-Dimethylphenol 5292-43-3 177609-29-9  
 625122-37-4  
 (preparation of phenol compds. for pos.-type resist compns. for forming high-resolution patterns)  
 REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L50 ANSWER 4 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2008:551471 HCAPLUS Full-text  
 DOCUMENT NUMBER: 148:526572  
 TITLE: Radiation-sensitive composition  
 INVENTOR(S): Echigo, Masatoshi; Oguro, Dai  
 PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Company, Inc., Japan  
 SOURCE: PCT Int. Appl., 242pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

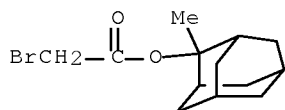
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2008053974	A1	20080508	WO 2007-JP71346	20071101
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
JP 2008116677	A	20080522	JP 2006-299522	20061102
PRIORITY APPLN. INFO.:			JP 2006-299522	A 20061102
			JP 2007-113185	A 20070423
			JP 2007-113186	A 20070423
			JP 2007-124918	A 20070509
			JP 2007-139763	A 20070525
			JP 2007-139764	A 20070525

ED Entered STN: 08 May 2008  
 GI





- AB Disclosed is a radiation-sensitive composition containing a resist compound which enables to obtain a resist pattern with a good shape, while having high sensitivity, high resolution, high etching resistance and low outgas. Also disclosed are a resist pattern-forming method using such a radiation-sensitive composition; a composition for forming a novel photoresist foundation layer which is excellent in optical characteristics and etching resistance, while having substantially no sublimation product; and a foundation layer made of such a composition. Specifically disclosed is a radiation-sensitive composition containing a cyclic compound having a specific structure I (L = C1-20 alkylene, C3-20 cycloalkylene, C6-24 arylene, etc.; R<sub>1</sub> = C1-20 alkyl, C3-20 cycloalkyl, C6-20 aryl, etc.; R<sup>o</sup> = C2-20 alkyl, Ph substituted with cyano, nitro, halo, etc.; m = integer 1-4), namely a cyclic compound (A) having a mol. weight of 700-5000 which is synthesized by a condensation reaction between a compound having 1-4 formyl groups and 2-59 carbon atoms (an aldehydic compound (A1)) and a compound having 1-3 phenolic hydroxy groups and 6-15 carbon atoms (a phenolic compound (A2)), and a solvent. Also specifically disclosed is a cyclic compound used in such a composition
- IT 625122-37-4DP, phenolic hydrogen substituted  
(radiation-sensitive composition)
- RN 625122-37-4 HCAPLUS
- CN Acetic acid, 2-bromo-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester (CA INDEX NAME)



- (radiation-sensitive compn.)
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 25
- IT Photoimaging materials  
Photolithography  
Photoresists  
(radiation-sensitive composition)
- IT 27634-89-5P 612807-52-0DP, phenolic hydrogen substituted  
625122-37-4DP, phenolic hydrogen substituted 1021604-69-2DP,

10/594,282

phenolic hydrogen substituted 1021604-70-5P 1021604-71-6P  
1021604-72-7P

(radiation-sensitive composition)

IT 109-92-2DP, Ethyl vinyl ether, reaction product with  
pentacyclooctacosadodecaene 2182-55-0DP, Cyclohexyl vinyl ether,  
reaction product with pentacyclooctacosadodecaene 5292-43-3DP,  
tert-Butyl bromoacetate, reaction product with  
pentacyclooctacosadodecaene 34619-03-9DP, Di-tert-butyl carbonate,  
reaction product with pentacyclooctacosadodecaene 129831-85-2DP,  
phenolic hydrogen substituted 176798-35-9P 181231-13-0DP, phenolic  
hydrogen substituted 625122-37-4DP, reaction product with  
pentacyclooctacosadodecaene 1021604-60-3DP, phenolic hydrogen  
substituted 1021604-61-4DP, phenolic hydrogen substituted  
1021604-62-5DP, phenolic hydrogen substituted 1021604-63-6DP,  
phenolic hydrogen substituted 1021604-64-7DP, phenolic hydrogen  
substituted 1021604-65-8DP, phenolic hydrogen substituted  
1021604-66-9DP, phenolic hydrogen substituted 1021604-67-0DP,  
phenolic hydrogen substituted 1021604-73-8DP, phenolic hydrogen  
substituted 1021604-74-9DP, phenolic hydrogen substituted  
1021604-75-0DP, phenolic hydrogen substituted 1021604-76-1P  
1021604-77-2P 1021604-78-3P 1021604-79-4P 1021604-80-7P  
1021604-81-8P 1021604-82-9P 1021604-83-0P 1021604-84-1P  
1021604-85-2P 1021604-86-3P 1021604-87-4P 1021604-88-5P  
1021604-89-6P 1021867-71-9DP, phenolic hydrogen substituted

(radiation-sensitive composition)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

L50 ANSWER 5 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2008:499891 HCAPLUS Full-text

DOCUMENT NUMBER: 148:506631

TITLE: Compounds for solubility control in  
positive-working photoresist  
composition and method for  
photoresist pattern formation using the  
same

INVENTOR(S): Shiono, Taiju; Suzuki, Takako; Haneda, Hideo

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 46pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

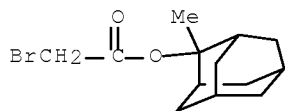
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2008094782	A	20080424	JP 2006-280203	20061013
PRIORITY APPLN. INFO.:			JP 2006-280203	20061013

ED Entered STN: 24 Apr 2008

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

- AB The title compound has general structure I( R' = H, acid-sensitive solubility-controlling group; R11-17 = C1-10 alkyl, aromatic hydrocarbon; g,j = integer  $\geq 1$ ; k, q = integer  $\geq 0$ ; g+j+k+l $\leq 5$ ; R10 = H, halo, alkyl, etc.; d = integer 0-4; b = integer  $\geq 1$ ; l, m = integer  $\geq 0$ ; b+l+n $\leq 4$ ; c = integer  $\geq 1$ ; n,o = integer  $\geq 0$ ; c+n+o $\leq 4$ ). The compound provides pattern of improved line edge roughness.
- IT 625122-37-4, Acetic acid, bromo-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester  
(solubility control agent in pos.-working photoresist composition and method for photoresist pattern formation using the same)
- RN 625122-37-4 HCAPLUS
- CN Acetic acid, 2-bromo-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester (CA INDEX NAME)



- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 25
- ST sily control pos photoresist compn
- IT Photolithography  
Photoresists  
(solubility control agent in pos.-working photoresist composition and method for photoresist pattern formation using the same)
- IT Solubility  
(solubility-control agent; solubility control agent in pos.-working photoresist composition and method for photoresist pattern formation using the same)
- IT 95-87-4, 2,5-Dimethylphenol 3046-82-0,  
5,5'-Methylenebis[salicylaldehyde] 34040-64-7 625122-37-4,  
Acetic acid, bromo-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester  
(solubility control agent in pos.-working photoresist composition and method for photoresist pattern formation using the same)
- IT 1020206-44-3P 1020206-45-4P  
(solubility control agent in pos.-working photoresist composition and method for photoresist pattern formation using the same)
- IT 1020539-45-0P  
(solubility control agent in pos.-working photoresist composition and method for photoresist pattern formation using the same)

L50 ANSWER 6 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2007:1323551 HCAPLUS Full-text

DOCUMENT NUMBER: 148:272929

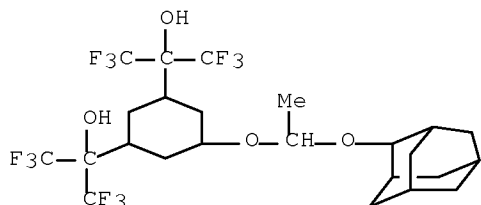
TITLE: Chemically amplified photoresist composition including dissolution inhibitor capable of increasing solubility difference between exposure portion and non-exposure portion

INVENTOR(S): Jung, Young Ho; Son, Eun Kyung; Lee, Jae Woo; Kim,

PATENT ASSIGNEE(S): Jae Hyun  
 SOURCE: Dongjin Semichem Co., Ltd., S. Korea  
 Repub. Korean Kongkae Taeho Kongbo, No pp. given  
 CODEN: KRXXA7  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Korean  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 2007067840	A	20070629	KR 2005-129257	20051226
PRIORITY APPLN. INFO.:			KR 2005-129257	20051226

ED Entered STN: 20 Nov 2007  
 AB Provided is a dissoln. inhibitor, which enhances transparency in the short wavelength of 248 and 193nm and dry etching resistance to form ultrafine resist patterns and increase solubility difference between an exposure portion and a nonexposure portion in a developer solution to improve line edge roughness and resolution. The dissoln. inhibitor has bulky saturated hydrocarbons and electroneg. CF<sub>3</sub> groups. The dissoln. inhibitor is prepared by reacting a hydrocarbon having a vinyloxy group with 3,5-bis(hexafluoro-2-hydroxy-2-propyl)cyclohexyl alc.  
 IT 1007196-87-3P  
 (chemical amplified photoresist composition including dissoln. inhibitor capable of increasing solubility difference between exposure portion and non-exposure portion)  
 RN 1007196-87-3 HCAPLUS  
 CN 1,3-Cyclohexanedimethanol, 5-[1-(tricyclo[3.3.1.1.3,7]dec-2-yloxy)ethoxy]- $\alpha$ 1, $\alpha$ 1, $\alpha$ 3, $\alpha$ 3-tetrakis(trifluoromethyl)- (CA INDEX NAME)



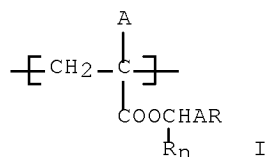
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 IT 1007196-85-1P 1007196-86-2P 1007196-87-3P 1007196-88-4P  
 (chemical amplified photoresist composition including dissoln. inhibitor capable of increasing solubility difference between exposure portion and non-exposure portion)

L50 ANSWER 7 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2007:1052563 HCAPLUS Full-text  
 DOCUMENT NUMBER: 147:374539  
 TITLE: Positive photoresist composition and lithographic pattern forming method for semiconductor device fabrication  
 INVENTOR(S): Mizutani, Kazuyoshi; Iwato, Kaoru; Kodama, Kunihiro; Tsuchihashi, Toru

PATENT ASSIGNEE(S): Fujifilm Corporation, Japan  
 SOURCE: Eur. Pat. Appl., 69pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1835342	A2	20070919	EP 2007-5158	20070313
EP 1835342	A3	20080604		
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU, RS				
JP 2008096951	A	20080424	JP 2007-52758	20070302
KR 2007093885	A	20070919	KR 2007-24879	20070314
US 20070218406	A1	20070920	US 2007-717618	20070314
PRIORITY APPLN. INFO.:			JP 2006-69382	A 20060314
			JP 2006-247244	A 20060912

ED Entered STN: 20 Sep 2007  
 GI



AB A pos. photoresist composition comprising: a resin containing a repeating unit represented by formula I, and a compound capable of generating an acid upon irradiation with actinic rays or radiation (where AR represents an aryl group; R<sub>n</sub> represents an alkyl group, a cycloalkyl group or an aryl group; and A represents an atom or group selected from the group consisting of a hydrogen atom, an alkyl group, a halogen atom, a cyano group and an alkyloxycarbonyl group), and a pattern forming lithog. method using the resist composition for semiconductor device fabrication.

IT 949567-82-2P 949567-83-3P 949567-84-4P  
 (pos. photoresist composition)

RN 949567-82-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-phenylethyl ester, polymer with 1,4-bis[1-(4-ethenylphenoxy)ethoxy]tricyclo[3.3.1.1<sup>3,7</sup>]decane and ethenylbenzene (CA INDEX NAME)

CM 1

CRN 949567-81-1

CMF C30 H36 O4

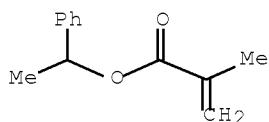
10/594,282



CM 2

CRN 19321-42-7

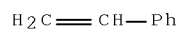
CMF C12 H14 O2



CM 3

CRN 100-42-5

CMF C8 H8



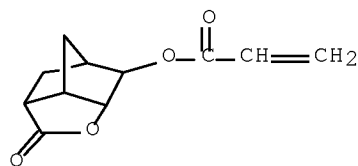
RN 949567-83-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl 2-propenoate, 3-hydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-methyl-2-propenoate and 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 242129-35-7

CMF C11 H12 O4

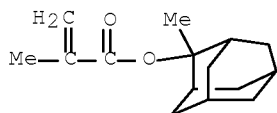


10/594,282

CM 2

CRN 177080-67-0

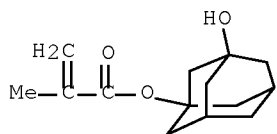
CMF C15 H22 O2



CM 3

CRN 115372-36-6

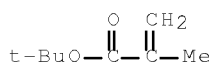
CMF C14 H20 O3



CM 4

CRN 585-07-9

CMF C8 H14 O2



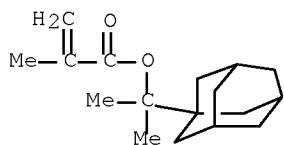
RN 949567-84-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.13,7]dec-1-yl ester, polymer with 1-methyl-1-tricyclo[3.3.1.13,7]dec-1-ylethyl 2-methyl-2-propenoate, 1-phenylethyl 2-methyl-2-propenoate and tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 279218-76-7

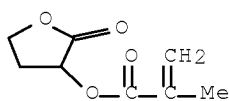
CMF C17 H26 O2



CM 2

CRN 195000-66-9

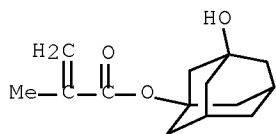
CMF C8 H10 O4



CM 3

CRN 115372-36-6

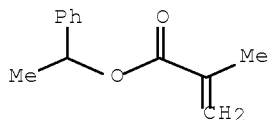
CMF C14 H20 O3



CM 4

CRN 19321-42-7

CMF C12 H14 O2



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

Section cross-reference(s): 35, 38, 76

ST pos photoresist photoacid acid generator pattern lithog



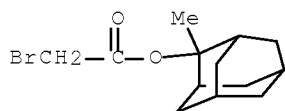
semiconductor  
 IT Lithography  
 (ultramicrolithog.; pos. photoresist composition)  
 IT 200808-68-0P 949567-55-9P 949567-56-0P 949567-57-1P  
 949567-59-3P 949567-60-6P 949567-61-7P 949567-62-8P  
 949567-63-9P 949567-64-0P 949567-65-1P 949567-66-2P  
 949567-68-4P 949567-70-8P 949567-71-9P 949567-72-0P  
 949567-73-1P 949567-74-2P 949567-75-3P 949567-76-4P  
 949567-78-6P 949567-79-7P 949567-82-2P  
 949567-83-3P 949567-84-4P  
 (pos. photoresist composition)

L50 ANSWER 8 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2007:534638 HCAPLUS Full-text  
 DOCUMENT NUMBER: 146:531178  
 TITLE: Photoactive compounds  
 INVENTOR(S): Rahman, M. Dalil; Padmanaban, Munirathna  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 21pp., Cont.-in-part of  
 U.S. Ser. No. 280,842, abandoned.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20070111138	A1	20070517	US 2006-355400	20060216
WO 2007057773	A2	20070524	WO 2006-IB3315	20061115
WO 2007057773	A3	20071115		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA				
EP 1963919	A2	20080903	EP 2006-820954	20061115
R: DE, FR				
KR 2008066819	A	20080716	KR 2008-712503	20080526
PRIORITY APPLN. INFO.:			US 2005-280842	B2 20051116
			US 2006-355400	A 20060216
			WO 2006-IB3315	W 20061115

OTHER SOURCE(S): MARPAT 146:531178  
 ED Entered STN: 18 May 2007  
 AB The present invention relates to novel photoacid generators useful in  
 photoresist compns. in the field of microlithog., and especially useful for  
 imaging neg. and pos. patterns in the production of semiconductor devices as  
 well as photoresist compns. and processes for imaging photoresists.  
 IT 625122-37-4P  
 (photoacid generator for photoresist)

RN 625122-37-4 HCAPLUS  
 CN Acetic acid, 2-bromo-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester (CA  
 INDEX NAME)



INCL 430270100  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 IT Lithography  
 (patterning; photoacid generator for photoresist)  
 IT 108-24-7P, Acetic anhydride 832-53-1P 82113-65-3P  
 625122-37-4P 857285-76-8P 870466-10-7P 936833-95-3P  
 936833-96-4P 936833-98-6P 936834-00-3P 936834-01-4P  
 936834-02-5P 936834-03-6P 936834-04-7P 936834-05-8P  
 936834-06-9P 936834-08-1P 936834-09-2P 936834-10-5P  
 936834-11-6P  
 (photoacid generator for photoresist)

L50 ANSWER 9 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:350618 HCAPLUS Full-text

DOCUMENT NUMBER: 146:368733

TITLE: Resist compounds, their production method,  
 positive resist compositions and method for  
 forming resist patterns

INVENTOR(S): Shiono, Daiju; Dazai, Takahiro; Hirayama, Taku;  
 Kasai, Kohei; Hada, Hideo

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: PCT Int. Appl., 81pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007034719	A1	20070329	WO 2006-JP318151	20060913
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
JP 2007112777	A	20070510	JP 2005-320551	20051104
JP 2008019235	A	20080131	JP 2006-239982	20060905
KR 2008038232	A	20080502	KR 2008-706532	20080318

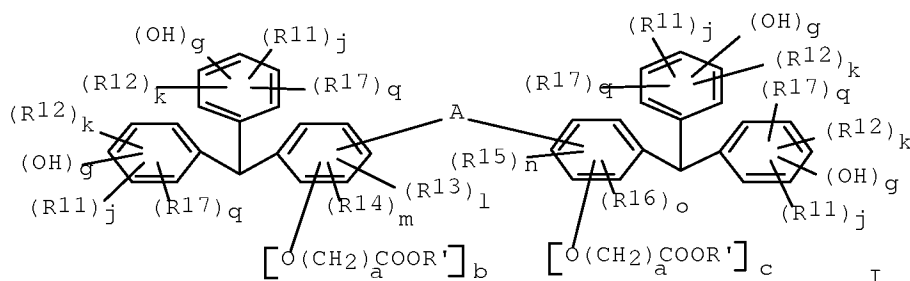
## PRIORITY APPLN. INFO.:

JP 2005-271760	A	20050920
JP 2005-320550	A	20051104
JP 2005-320551	A	20051104
JP 2006-76270	A	20060320
JP 2006-167263	A	20060616
JP 2006-239982	A	20060905
WO 2006-JP318151	W	20060913

OTHER SOURCE(S): MARPAT 146:368733

ED Entered STN: 29 Mar 2007

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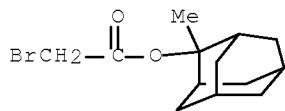


AB The resist compns. contain compns. I (A = Q; CH<sub>2</sub>, alicyclic group; R' = H, acid-cleavable dissoln. inhibiting group, where ≥1 of R' being an acid-cleavable dissoln. inhibiting group; R<sub>11</sub>-R<sub>19</sub> = C<sub>1</sub>-10 alkyl or an aromatic hydrocarbon group and may include a heteroatom in the structure; g, j ≥ 1; k, q ≥ 0; g + j + k + q ≤ 5; a = 1-3; b ≥ 1; l, m ≥ 0; b + l + m ≤ 4; c ≥ 1; n, o ≥ 0; c + n + o ≤ 4; r, y, z ≥ 0; r + y + z ≤ 4). The resist compns. can form high-resol. resist patterns with improved line edge roughness (LER) by electron beam lithog. and extreme UV (EUV) lithog.

IT 625122-37-4

(pos. resist compns. for forming high-resol. resist patterns)

RN 625122-37-4 HCAPLUS

CN Acetic acid, 2-bromo-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester (CA INDEX NAME)

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST pos resist pattern formation electron beam lithog; extreme  
UV lithog pos resist pattern formation

IT Photolithography  
(extreme UV; pos. resist compns. for forming high-resol.  
resist patterns)

IT Electron beam lithography  
Positive photoresists  
(pos. resist compns. for forming high-resol. resist  
patterns)

IT 95-87-4, 2,5-Dimethylphenol 576-26-1, 2,6-Dimethylphenol  
1596-13-0, 2-Cyclohexyl-5-methylphenol 1625-60-1 3046-82-0  
5292-43-3 177609-29-9 625122-37-4  
(pos. resist compns. for forming high-resol. resist patterns)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

L50 ANSWER 10 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:31356 HCAPLUS Full-text

DOCUMENT NUMBER: 146:131734

TITLE: Compound for positive electron beam resist  
composition and method for forming resist pattern  
using the same

INVENTOR(S): Hirosaki, Takako; Shiono, Daiju; Hirayama, Taku;  
Hada, Hideo

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: PCT Int. Appl., 52pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

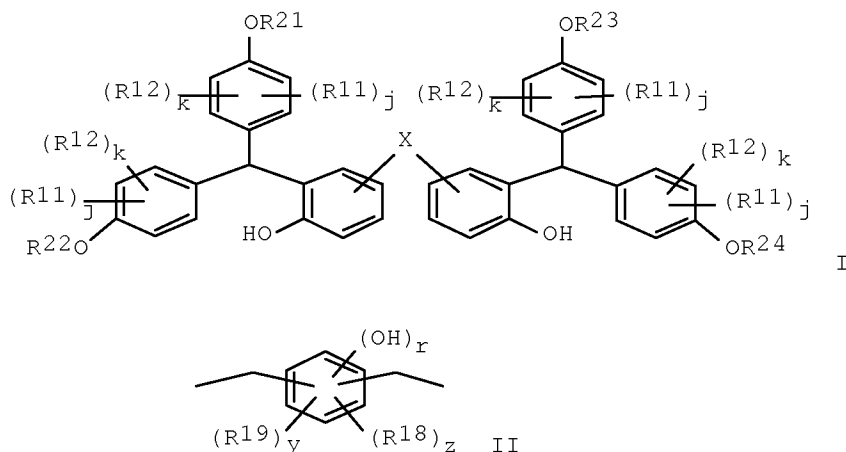
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007004566	A1	20070111	WO 2006-JP313103	20060630
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
JP 2007015944	A	20070125	JP 2005-196132	20050705
KR 2008018944	A	20080228	KR 2008-700494	20080108
PRIORITY APPLN. INFO.:			JP 2005-196132	A 20050705
			WO 2006-JP313103	W 20060630

OTHER SOURCE(S): MARPAT 146:131734

ED Entered STN: 11 Jan 2007

GI



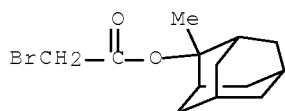
AB Disclosed is a pos. resist composition which enables to form a resist pattern which is reduced in roughness. Also disclosed is a method for forming a resist pattern. Specifically disclosed is a pos. resist composition containing a compound represented by the following general formula I (In the formula I, R11 and R12 independently represent an alkyl group having 1-10 carbon atoms or an aromatic hydrocarbon group, and they may contain a heteroatom in their structures; R21-R24 independently represent a hydrogen atom or an acid-cleavable dissoln. inhibiting group, and two of R21-R24 are hydrogen atoms and the other two are acid-cleavable dissoln. inhibiting groups; j and k independently represent 0 or an integer of not less than 1 while j + k is not more than 4; and X represents a group represented by the general formula II or -CH2- below.). Also specifically disclosed is a method for forming a resist pattern by using such a pos. resist composition

IT 625122-37-4

(compound for pos. resist composition)

RN 625122-37-4 HCAPLUS

CN Acetic acid, 2-bromo-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester (CA INDEX NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 25

ST pos photoresist compn

IT Electron beam lithography

Lithography

(compound for pos. resist composition and method for forming resist pattern using the same)

IT 231280-30-1 625122-37-4

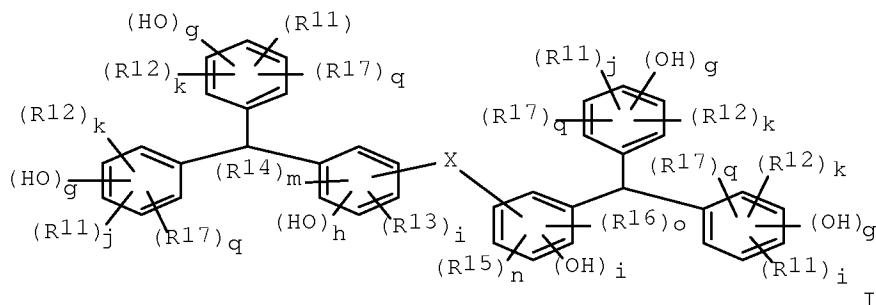
(compound for pos. resist composition)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L50 ANSWER 11 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2006:1337981 HCAPLUS Full-text  
 DOCUMENT NUMBER: 146:90235  
 TITLE: Resist compound, positive resist composition, and method of forming resist pattern  
 INVENTOR(S): Shiono, Daiju; Hirayama, Taku; Hada, Hideo  
 PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 48pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006134814	A1	20061221	WO 2006-JP311443	20060607
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
JP 2006347974	A	20061228	JP 2005-177504	20050617
PRIORITY APPLN. INFO.:			JP 2005-177504	A 20050617

OTHER SOURCE(S): MARPAT 146:90235  
 ED Entered STN: 22 Dec 2006  
 GI

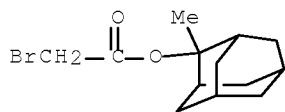


AB The resist compound is a polyhydric phenol compound I (R11-R17 = C1-10 alkyl or an aromatic hydrocarbon group optionally containing a heteroatom in the structure; X = alicyclic group; g, j  $\geq$  1; k, q, l, m, n, o  $\geq$  0; g + j + k + q  $\leq$  5; h  $\geq$  1; h + l + m  $\leq$  4; i + n + o  $\leq$  4) (mol. weight 300-2500) having part or all of the hydrogen atoms of the phenolic hydroxy groups replaced with an acid-dissociable dissoln.-inhibitive group. A pos. resist composition containing the resist compound gave patterns with high resolution and reduced line-edge roughness (LER).

IT 625122-37-4  
(preparation of resist compds. for pos. resist compns.)

RN 625122-37-4 HCAPLUS

CN Acetic acid, 2-bromo-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester (CA INDEX NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT Positive photoresists  
(pos. resist compns. for patterns with high resolution and reduced line-edge roughness)

IT 95-87-4, 2,5-Xylenol 582311-10-2 625122-37-4  
(preparation of resist compds. for pos. resist compns.)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L50 ANSWER 12 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:1337968 HCAPLUS Full-text

DOCUMENT NUMBER: 146:90234

TITLE: Polyhydric phenol compound, resist compound, positive resist composition, and method of forming resist pattern

INVENTOR(S): Shiono, Daiju; Hirayama, Taku; Hada, Hideo

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: PCT Int. Appl., 63pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

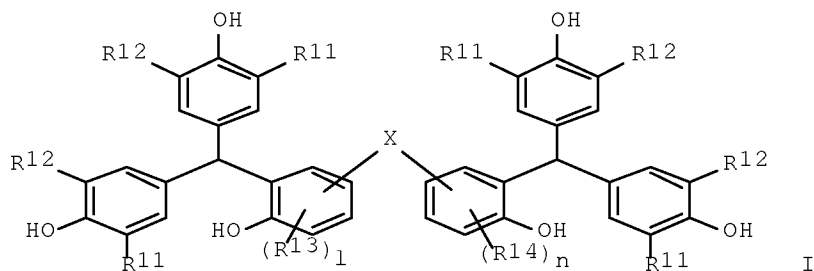
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006134811	A1	20061221	WO 2006-JP311425	20060607
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				

10/594,282

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,  
IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR,  
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,  
TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

JP 2006347891	A	20061228	JP 2005-172235	20050613
JP 2006347892	A	20061228	JP 2005-172236	20050613
PRIORITY APPLN. INFO.:			JP 2005-172235	A 20050613
			JP 2005-172236	A 20050613

OTHER SOURCE(S): MARPAT 146:90234  
ED Entered STN: 22 Dec 2006  
GI

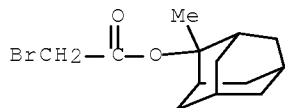


AB The resist compound is a polyhydric phenol compound I [R11, R12 = C3-10 branched alkyl; R13, R14 = C1-5 linear or branched alkyl; X = CH2, (un)substituted aromatic divalent group; l, n = 0, 1] (mol. weight 300-2500) having part or all of the hydrogen atoms of the phenolic hydroxy groups replaced with an acid-dissociable dissoln.-inhibitive group. A pos. resist composition containing the resist compound gave patterns with high resolution and reduced line-edge roughness (LER).

IT 625122-37-4  
(preparation of polyhydric phenol derivs. as resist compds. for pos. resist compns.)

RN 625122-37-4 HCAPLUS

CN Acetic acid, 2-bromo-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester (CA INDEX NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
IT Positive photoresists  
(pos. resist compns. for patterns with high resolution and



reduced line-edge roughness)

IT 2078-54-8 3046-82-0 625122-37-4 917377-77-6  
 (preparation of polyhydric phenol derivs. as resist compds. for pos.  
 resist compns.)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
 RE FORMAT

L50 ANSWER 13 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:884357 HCAPLUS Full-text

DOCUMENT NUMBER: 145:302794

TITLE: Positive photoresist composition

, method for forming resist pattern and compound

INVENTOR(S): Shiono, Daiju; Hirayama, Taku; Hada, Hideo

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: PCT Int. Appl., 52pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

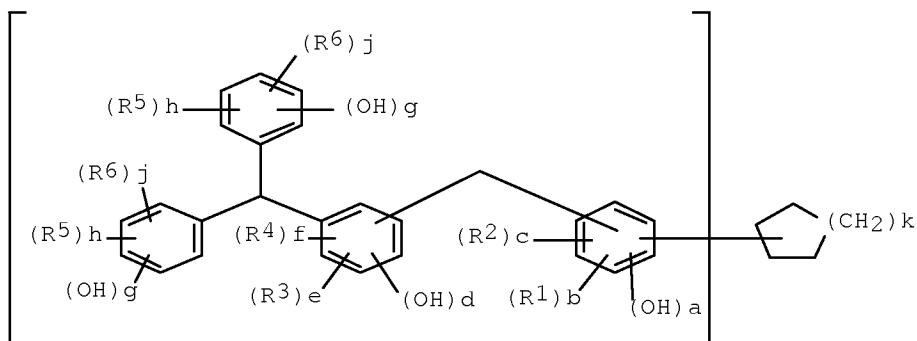
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006090667	A1	20060831	WO 2006-JP302961	20060220
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
JP 2006235340	A	20060907	JP 2005-51219	20050225
KR 2007093460	A	20070918	KR 2007-719131	20070821
KR 864395	B1	20081020		
PRIORITY APPLN. INFO.:			JP 2005-51219	A 20050225
			WO 2006-JP302961	W 20060220

OTHER SOURCE(S): MARPAT 145:302794

ED Entered STN: 31 Aug 2006

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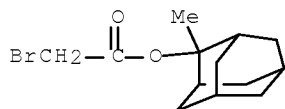
AB Disclosed is a pos. resist composition containing a base component (A) with an acid-cleavable dissoln. inhibiting group whose alkali solubility is increased by the action of an acid, and an acid generator component (B) which generates an acid when exposed to light. The base component (A) contains a compound (A1) which is obtained by substituting a part or all of hydrogen atoms of a phenolic hydroxyl group of a polyvalent phenolic compound, which has a mol. weight of 300-2500 and is represented by the general formula I (R1-6 = C1-10 alkyl, aromatic hydrocarbon; a = integer  $\geq 1$ ; b, c = 0, integer  $\geq 1$ ; a+b+c $\leq 4$ ; d = integer  $\geq 1$ ; e, f = 0, integer  $\geq 1$ , d+e+f $\leq 4$ ; g = integer  $\geq 1$ ; h, i = 0, integer  $\geq 1$ ; g+h+i $\leq 4$ ; j = 1, 2; k = integer 1-3) with at least one group selected from the group consisting of acid-cleavable dissoln. inhibiting groups -[CH2]-COO-R7 and acid-cleavable dissoln. inhibiting groups -C(M)(R9)(-OR8) (R7-8 = alkyl; R9 = H, lower alkyl; n' = integer 1-3).

IT 625122-37-4

(invention's compound in pos. photoresist composition)

RN 625122-37-4 HCAPLUS

CN Acetic acid, 2-bromo-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester (CA INDEX NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST pos photoresist compo resist

IT Photolithography

Photoresists

(pos. photoresist composition, method for forming resist pattern and compound)

IT 90-02-8, Salicylaldehyde, reactions 95-87-4, 2,5-Xylenol 5292-43-3  
625122-37-4 908143-42-0

(invention's compound in pos. photoresist composition)

IT 908143-05-5P 908143-06-6P

(invention's compound in pos. photoresist composition)

IT 908143-06-6DP, reaction product with tricyclodecyl derivative or tert-Bu bromoacetate

(invention's compound in pos. photoresist composition)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L50 ANSWER 14 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:410214 HCAPLUS Full-text

DOCUMENT NUMBER: 144:422710

TITLE: Photoacid generation type photoresist component with acid-cleavable dissolution inhibiting groups  
INVENTOR(S): Shiono, Daiju; Hirayama, Taku; Ogata, Toshiyuki; Hada, Hideo

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: PCT Int. Appl., 58 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006046383	A1	20060504	WO 2005-JP18143	20050930
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
JP 2006267996	A	20061005	JP 2005-212904	20050722
EP 1806619	A1	20070711	EP 2005-788289	20050930
R:	BE, DE, FR			
KR 2007084080	A	20070824	KR 2007-710473	20070508
PRIORITY APPLN. INFO.:			JP 2004-315601	A 20041029
			JP 2004-378248	A 20041227
			JP 2005-50722	A 20050225
			JP 2005-212904	A 20050722
			WO 2005-JP18143	W 20050930

ED Entered STN: 05 May 2006

AB Disclosed is a resist composition containing a compound obtained by substituting a part or all of hydrogen atoms in the phenolic hydroxyl groups of a polyvalent phenolic compound (a) which has two or more phenolic hydroxyl groups and a mol. weight of 300-2500 with at least one group selected from the group consisting of acid-cleavable dissoln. inhibiting groups represented by the general formulas  $-(CH_2)_nCO_2R_1$  or  $-CHR_3OR_2$  below (wherein  $R_1$  and  $R_2$  independently represent a branched or cyclic alkyl group which may contain a

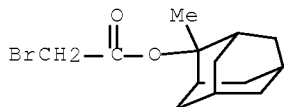
heteroatom, R3 represents a hydrogen atom or a lower alkyl group, and n' represents an integer of 1-3).

IT 625122-37-4P

(reactant of photoacid generation type photoresist component with acid-cleavable dissoln. inhibiting groups)

RN 625122-37-4 HCAPLUS

CN Acetic acid, 2-bromo-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester (CA INDEX NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT Photoresists

(resist composition for photoacid generation type photoresist)

IT 91-04-3P, 2,6-Bis(hydroxymethyl)-4-methylphenol 177609-29-9P

231280-30-1P 231280-32-3P 625122-37-4P 884498-10-6P

884498-12-8P

(reactant of photoacid generation type photoresist component with acid-cleavable dissoln. inhibiting groups)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L50 ANSWER 15 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:1220682 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 143:485825

TITLE: Adamantane derivative, method for producing same and photosensitive material for photoresist

INVENTOR(S): Ito, Katsuki; Tanaka, Shinji; Ono, Hidetoshi; Hatakeyama, Naoyoshi

PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan

SOURCE: PCT Int. Appl., 22 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

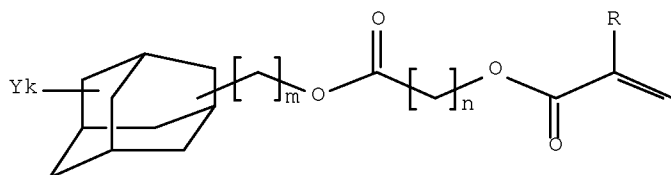
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005108343	A1	20051117	WO 2005-JP8354	20050506
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA,				

10/594,282

GN, GQ, GW, ML, MR, NE, SN, TD, TG  
 PRIORITY APPLN. INFO.: JP 2004-139904 A 20040510

OTHER SOURCE(S): MARPAT 143:485825  
 ED Entered STN: 18 Nov 2005  
 GI



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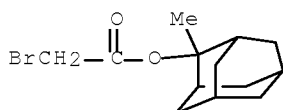
AB Disclosed is an adamantane derivative useful as a monomer for a functional resin such as a photoresist resin which is used as a photosensitive material for photoresists that is suitably used in fine processing, particularly in one using excimer laser radiation light or electron beam. Also disclosed are a method for efficiently producing such an adamantane derivative and a photosensitive material for photoresists containing such an adamantane derivative and having the above-mentioned characteristics. Specifically disclosed is an adamantane derivative which is characterized by having a structure represented by the following general formula I (wherein R represents a hydrogen atom, a Me group or a trifluoromethyl group; Y represents an alkyl group having 1-10 carbon atoms, a halogen atom or a hydroxyl group, or alternatively two Ys may combine together to form =O, and a plurality of Ys may be the same as or different from one another; k represents an integer of 0-15; m represents 0 or 1; and n represents an integer of 1-3). Also specifically disclosed are a method for producing an adamantane derivative represented by the above general formula I by reacting a haloalkyl adamantyl carboxylate with a (meth)acrylic acid or an acid anhydride thereof, and a photosensitive material for photoresists containing a polymer obtained from such an adamantane derivative

IT 625122-37-4

(adamantane derivative)

RN 625122-37-4 HCAPLUS

CN Acetic acid, 2-bromo-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester (CA INDEX NAME)



IC ICM C07C069-67

ICS C07C067-313; C08F020-28; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other

Reprographic Processes)

Section cross-reference(s): 23, 35

ST adamantane deriv photosensitive photoresist compn

IT 79-04-9, Chloroacetic acid chloride 79-41-4, Methacrylic acid,  
reactions 702-98-7, 2-Hydroxy-2-methyladamantane 760-93-0,  
Methacrylic acid anhydride 625122-37-4

(adamantane derivative)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

L50 ANSWER 16 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:1123873 HCAPLUS Full-text

DOCUMENT NUMBER: 143:413494

TITLE: Calixresorcinarene compounds, photoresist  
base materials, and compositions thereof

INVENTOR(S): Ishii, Hirotoshi; Owada, Takanori; Shibasaki,  
Yuzi; Ueda, Mitsuru

PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan

SOURCE: PCT Int. Appl., 52 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

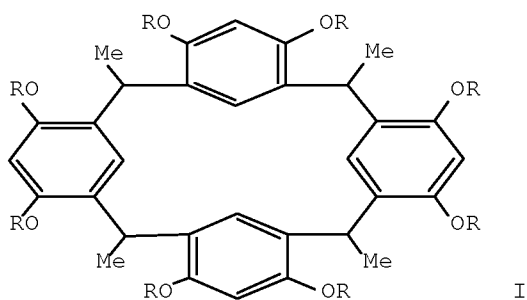
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005097725	A1	20051020	WO 2005-JP6512	20050401
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1734032	A1	20061220	EP 2005-728046	20050401
R:	BE, DE, FR, GB			
CN 1938259	A	20070328	CN 2005-80010812	20050401
US 20070190451	A1	20070816	US 2006-594282	20060926
KR 2007003980	A	20070105	KR 2006-720033	20060927
PRIORITY APPLN. INFO.:			JP 2004-111459	A 20040405
			JP 2004-111460	A 20040405
			WO 2005-JP6512	W 20050401

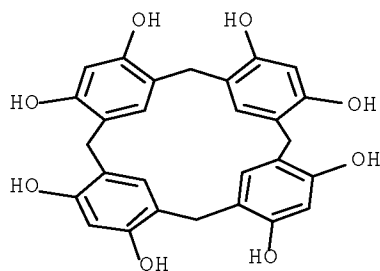
OTHER SOURCE(S): MARPAT 143:413494

ED Entered STN: 20 Oct 2005

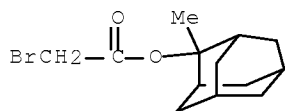
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- AB Disclosed are calixresorcinarene compds. (I: wherein R = h, 1-tetrahydropyranyl, 1-tetrahydrofuranyl, organic moiety having 2-methyl-2-adamantyloxycarbonylmethyl groups, etc.), use of I as resist base material, and resist compns. containing I. The compds. are useful for nanofabrication with extreme UV rays or electron beam.
- IT 125748-07-4DP, reaction products with bromoacetic acid esters  
625122-37-4DP, reaction product with calixresorcinarene  
(synthesis and use as radiation resists for nano-fabrication)
- RN 125748-07-4 HCAPLUS
- CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octol (CA INDEX NAME)



- RN 625122-37-4 HCAPLUS
- CN Acetic acid, 2-bromo-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester (CA INDEX NAME)

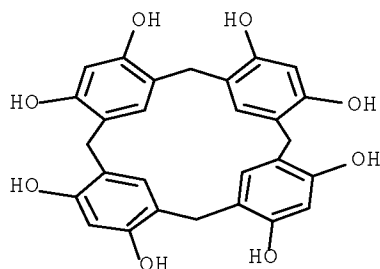


- IT 125748-07-4P  
(synthesis and use for radiation resist base)

materials)

RN 125748-07-4 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacos-  
 1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-  
 4,6,10,12,16,18,22,24-octol (CA INDEX NAME)



IC ICM C07C067-31

ICS C07C069-712; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)

Section cross-reference(s): 23

ST calixresorcinarene deriv radiation resist  
 nanofabrication

IT Photoresists

(UV; calixresorcinarene derivs. for resist base materials  
 for nano-fabrication)

IT Lithography

(submicron; radiation resist composition containing  
 calixresorcinarene derivs. for)

IT 280-57-9, 1,4-Diazabicyclo[2.2.2]octane 66003-78-9

(radiation resist composition containing  
 calixresorcinarene derivs. and)

IT 108-46-3, Resorcinol, reactions

(reaction with acetaldehyde in synthesis of calixresorcinarene  
 derivs. for radiation resist)

IT 75-07-0, Acetaldehyde, reactions

(reaction with resorcinol in synthesis of calixresorcinarene  
 derivs. for radiation resist)

IT 5292-43-3DP, tert-Butyl bromoacetate, reaction product with  
 calixresorcinarene 125748-07-4DP, reaction products with  
 bromoacetic acid esters 625122-37-4DP, reaction product with  
 calixresorcinarene

(synthesis and use as radiation resists for  
 nano-fabrication)

IT 125748-07-4P

(synthesis and use for radiation resist base  
 materials)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
 RE FORMAT

L50 ANSWER 17 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:701691 HCAPLUS Full-text

DOCUMENT NUMBER: 141:233198

TITLE: Photoresist composition for

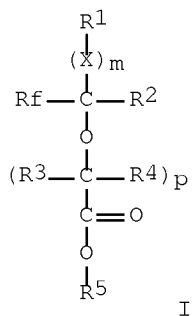


deep ultraviolet lithography

INVENTOR(S): Dammel, Ralph R.; Sakamuri, Raj; Houlihan, Frank  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 25 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

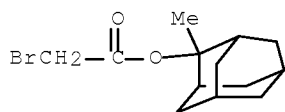
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040166434	A1	20040826	US 2003-371262	20030221
US 20040166433	A1	20040826	US 2003-658840	20030909
US 7211366	B2	20070501		
WO 2004074928	A2	20040902	WO 2004-EP1194	20040210
WO 2004074928	A3	20051013		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
EP 1602011	A2	20051207	EP 2004-709585	20040210
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1809789	A	20060726	CN 2004-80004743	20040210
JP 2006518476	T	20060810	JP 2006-501786	20040210
US 20070154841	A1	20070705	US 2007-716361	20070309
US 7351521	B2	20080401		
US 20070172762	A1	20070726	US 2007-716470	20070309
PRIORITY APPLN. INFO.:			US 2003-371262	A2 20030221
			US 2003-658840	A 20030909
			WO 2004-EP1194	W 20040210

ED Entered STN: 27 Aug 2004  
 GI



I

- AB The present invention relates to a photoresist compn . comprising a photoacid generator and at least one polymer comprising at least one unit as described by structure I (R1 =aliphatic cyclic unit of a polymer; R2 = H, F, C1-8 alkyl, fluoroalkyl, cycloalkyl, cyclofluroalkyl, Etc.; R1 and Rf combine to form an aliphatic cyclic unit of a polymer; R3,4 = H, F, C1-8 alkyl, fluoroalkyl, cycloalkyl, cyclofluroalkyl, Etc.; X = C1-8 alkylene, fluoroalkylene, O(C1-8)alkylene, O(C1-8) fluoroalkylene, cycloalkyl, cyclofluroalkyl; R5 = H, acid labile group; m =0-1; p =1-4). The invention also relates to a process for imaging the photoresist composition of the present invention.
- IT 625122-37-4DP, reaction product with hydroxy group contained fluorocyclic polymer  
(photoresist composition for deep UV lithog. containing)
- RN 625122-37-4 HCAPLUS
- CN Acetic acid, 2-bromo-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester (CA INDEX NAME)



- IC ICM G03F007-004
- INCL 430270100; X43-090.7; X43-032.6
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35, 38
- ST photoresist compn deep UV lithog
- IT Photolithography  
(deep UV; photoresist composition for deep UV lithog.)
- IT Photoresists  
(photoresist composition for deep UV lithog.)
- IT 5292-43-3DP, tert-Butyl bromoacetate, reaction product with hydroxy group contained polymer 357397-07-0DP, reaction product with Bu bromoacetate 448220-56-2DP, hydroxy group protected by methoxymethyl or/and (tert-butoxycarbonyl)methyl or methyladamantyloxymethyl groups 625122-37-4DP, reaction product with hydroxy group contained fluorocyclic polymer  
(photoresist composition for deep UV lithog. containing)
- IT 75-59-2, Tetramethylammonium hydroxide 865-47-4 2052-49-5, Tetrabutylammonium hydroxide  
(photoresist composition for deep UV lithog. containing)

L50 ANSWER 18 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:701690 HCAPLUS Full-text

DOCUMENT NUMBER: 141:233197

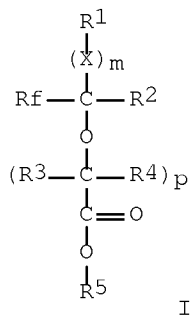
TITLE: Photoresist composition for deep ultraviolet lithography

INVENTOR(S): Dammel, Ralph R.; Sakamuri, Raj

PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 28 pp., Cont.-in-part of  
 U.S. Ser. No. 371,262.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040166433	A1	20040826	US 2003-658840	20030909
US 7211366	B2	20070501		
US 20040166434	A1	20040826	US 2003-371262	20030221
WO 2004074928	A2	20040902	WO 2004-EP1194	20040210
WO 2004074928	A3	20051013		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
EP 1602011	A2	20051207	EP 2004-709585	20040210
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1809789	A	20060726	CN 2004-80004743	20040210
JP 2006518476	T	20060810	JP 2006-501786	20040210
US 20070154841	A1	20070705	US 2007-716361	20070309
US 7351521	B2	20080401		
US 20070172762	A1	20070726	US 2007-716470	20070309
PRIORITY APPLN. INFO.:			US 2003-371262	A2 20030221
			US 2003-658840	A 20030909
			WO 2004-EP1194	W 20040210

ED Entered STN: 27 Aug 2004  
 GI

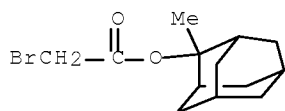


AB The present invention relates to a photoresist compn . comprising a photoacid generator and at least one polymer comprising at least one unit as described by structure I (R1 =aliphatic cyclic unit of a polymer; R2 = H, F, C1-8 alkyl, fluoroalkyl, cycloalkyl, cyclofluroalkyl, Etc.; R1 and Rf combine to form an aliphatic cyclic unit of a polymer; R3,4 = H, F, C1-8 alkyl, fluoroalkyl, cycloalkyl, cyclofluroalkyl, Etc.; X = C1-8 alkylene, fluoroalkylene, O(C1-8)alkylene, O(C1-8) fluoroalkylene, cycloalkyl, cyclofluroalkyl; R5 = H, acid labile group; m =0-1; p =1-4). The invention also relates to a process for imaging the photoresist composition of the present invention, and to a process of making the polymer in the presence of an organic base.

IT 625122-37-4P  
(photoresist composition for deep UV lithog. containing)

RN 625122-37-4 HCAPLUS

CN Acetic acid, 2-bromo-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester (CA INDEX NAME)



IC ICM G03F007-021  
ICS G03F007-30

INCL 430176000; X43-027.01; X43-032.6; X43-033.0

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35, 38

ST photoresist compn deep UV lithog

IT Photolithography  
(deep UV; photoresist composition for deep UV lithog.)

IT Photoresists  
(photoresist composition for deep UV lithog.)

IT 5292-43-3DP, tert-Butyl bromoacetate, reaction product with hydroxy group contained polymer 357397-07-0DP, reaction product with Bu bromoacetate 448220-56-2DP, hydroxy group protected with methoxymethyl or/and (tert-butoxycarbonyl) Me or methyladamantyloxymethyl group 625122-37-4P  
(photoresist composition for deep UV lithog. containing)

IT 75-59-2, Tetramethylammonium hydroxide 865-47-4 2052-49-5, Tetrabutylammonium hydroxide  
(photoresist composition for deep UV lithog. containing)

REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L50 ANSWER 19 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:355223 HCAPLUS Full-text

DOCUMENT NUMBER: 140:383102  
 TITLE: Photoresist base material, method for purification thereof, and photoresist compositions containing the same  
 INVENTOR(S): Ueda, Mitsuru; Ishii, Hirotoshi  
 PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 56 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004036315	A1	20040429	WO 2003-JP11137	20030901
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2004191913	A	20040708	JP 2003-112458	20030417
AU 2003261865	A1	20040504	AU 2003-261865	20030901
EP 1553451	A1	20050713	EP 2003-808872	20030901
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1688939	A	20051026	CN 2003-824240	20030901
TW 282037	B	20070601	TW 2003-92124659	20030905
US 20050271971	A1	20051208	US 2005-531208	20050414
PRIORITY APPLN. INFO.:			JP 2002-300144	A 20021015
			JP 2003-112458	A 20030417
			WO 2003-JP11137	W 20030901

OTHER SOURCE(S): MARPAT 140:383102

ED Entered STN: 30 Apr 2004

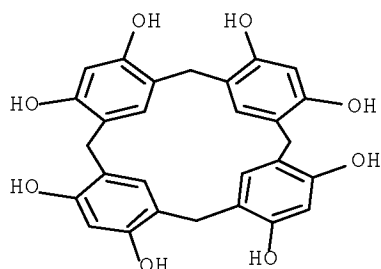
AB The invention relates to photoresist base materials consisting of extreme UV sensitive-organic compds. represented by the general formula (B-X)l(C-Y)m(D-Z)nA: [wherein A is a central structure consisting of an aliphatic group having C1-50, an aromatic group having C6-50 carbon, an organic group bearing both, or an organic group having a cyclic structure formed by repetition of these groups; B to D are each an extreme UV sensitive group, a group exhibiting a reactivity on the action of a chromophore sensitive to extreme UV rays, a C1-50 aliphatic or C6-50 aromatic group having such a group, an organic group having both groups, or a substituent having a branched structure; X to Z are each a single bond or an ether linkage; l to n are integers of 0-5 satisfying the relationship: l + m + n <u></u> 1; and A to D may each have a heteroatom-bearing substituent]. The invention provides photoresist base materials and photoresist compns. which enable ultrafine lithog. with extreme UV rays or the like and is suitable for use in semiconductor device fabrication.

IT 125748-07-4P, Calix[4]resorcinarene 211427-64-4P

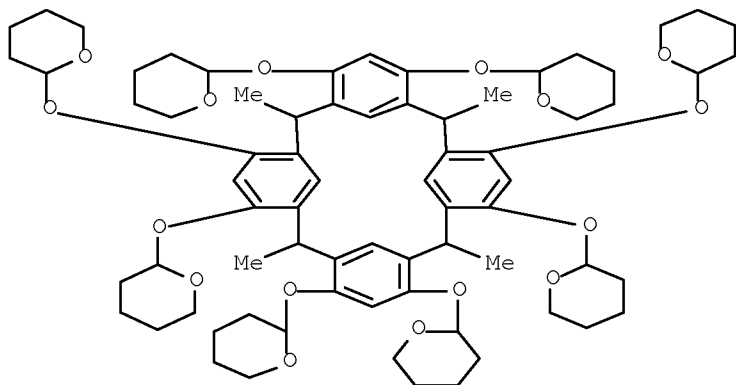
683227-74-9P 683227-75-0P 683227-76-1P

(photoresist base material, method for purification thereof, and photoresist compns. containing the same)

RN 125748-07-4 HCAPLUS

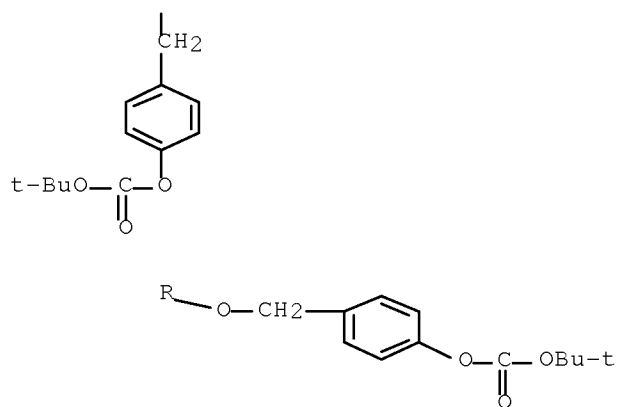
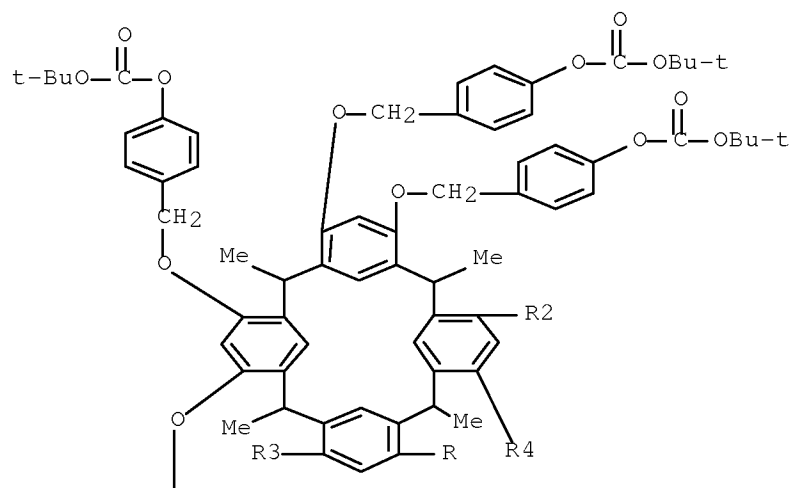
CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-  
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-  
4,6,10,12,16,18,22,24-octol (CA INDEX NAME)

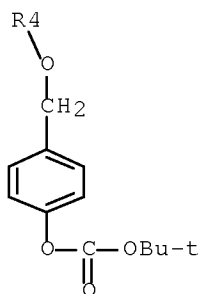
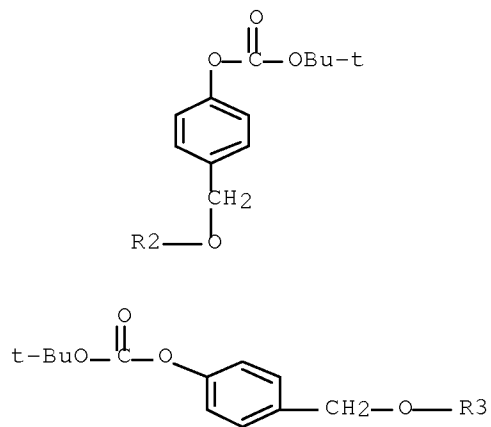
RN 211427-64-4 HCAPLUS

CN 2H-Pyran, 2,2',2'',2''',2''''',2''''',2''''',2''''''-[(2,8,14,20-  
tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-  
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-  
4,6,10,12,16,18,22,24-octayl)octakis(oxy)]octakis(tetrahydro- (9CI)  
(CA INDEX NAME)

RN 683227-74-9 HCAPLUS

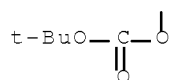
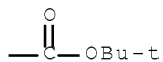
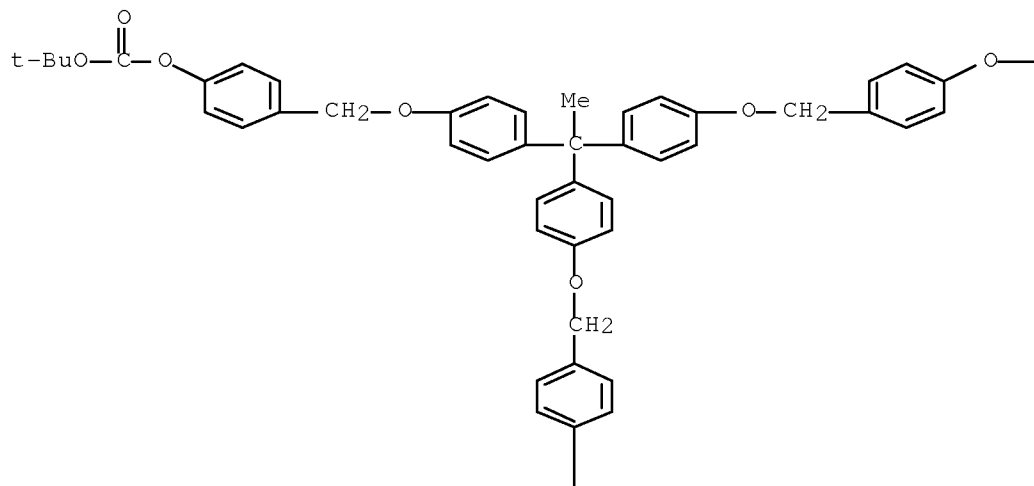
CN Carbonic acid, (2,8,14,20-  
tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-  
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-  
4,6,10,12,16,18,22,24-octayl)octakis(oxymethyl-4,1-phenylene)  
octakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



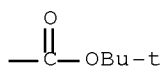
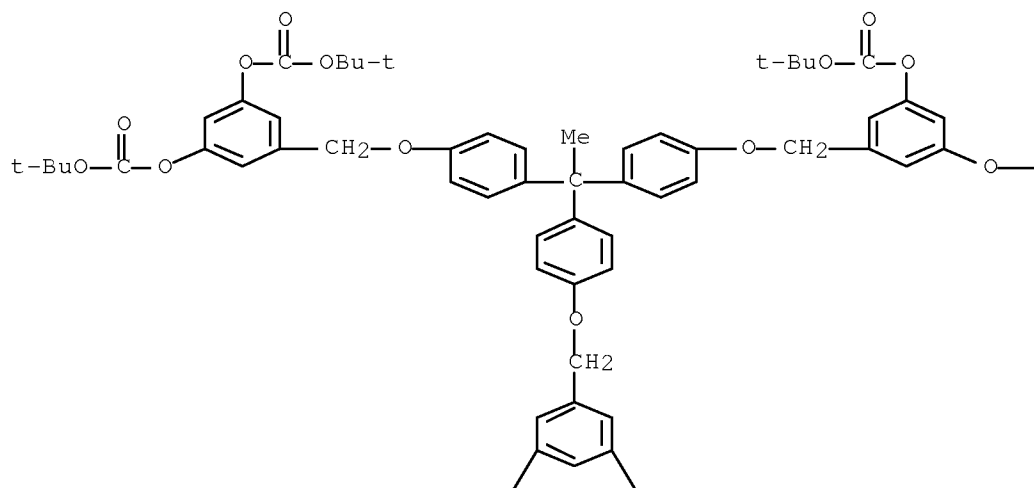


RN 683227-75-0 HCAPLUS  
 CN Carbonic acid, ethylidynetris(4,1-phenyleneoxymethylene-4,1-phenylene)  
 tris(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)





RN 683227-76-1 HCAPLUS  
 CN Carbonic acid, ethylidynetris(4,1-phenyleneoxymethylene-5,1,3-benzenetriyl) hexakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



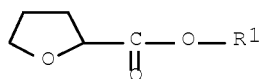
- IC ICM G03F007-039  
ICS C07C039-17; C07C069-736; C07D309-04
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 76
- ST photoresist compo
- IT Light-sensitive materials  
Photoresists  
Recrystallization  
Semiconductor device fabrication  
(photoresist base material, method for purification thereof, and photoresist compas. containing the same)
- IT Distillation  
(vacuum; photoresist base material, method for purification thereof, and

- photoresist compns. containing the same)
- IT 65338-98-9DP, tetrahydropyranyl and benzyl derivative ethers  
125748-07-4P, Calix[4]resorcinarene 211427-64-4P  
683227-72-7P 683227-73-8P 683227-74-9P  
683227-75-0P 683227-76-1P  
(photoresist base material, method for purification thereof, and  
photoresist compns. containing the same)
- IT 75-07-0, Acetaldehyde, reactions 108-46-3, Resorcinol, reactions  
110-87-2, Dihydro-2H-pyran 623-05-2, 4-Hydroxybenzyl alcohol  
1927-95-3, 4-Bromophenyl acetate 5001-18-3, 1,3-Dihydroxyadamantane  
5292-43-3, tert-Butyl bromoacetate 24424-99-5, Di-tert-butyl  
dicarbonate 27955-94-8 29654-55-5, 3,5-Dihydroxybenzylalcohol  
99181-50-7, 1,3,5-Trihydroxyadamantane  
(photoresist base material, method for purification thereof, and  
photoresist compns. containing the same)
- IT 156281-11-7P, 4-(tert-Butoxycarbonyloxy)benzylalcohol  
(photoresist base material, method for purification thereof, and  
photoresist compns. containing the same)
- REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

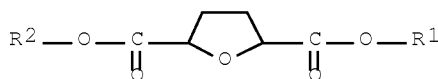
L50 ANSWER 20 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2004:154639 HCAPLUS Full-text  
DOCUMENT NUMBER: 140:207471  
TITLE: Photoresist composition and tetrahydrofuran  
carboxylate additive for it  
INVENTOR(S): Onishi, Osamu  
PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2004062011	A	20040226	JP 2002-222643	20020731
JP 4076814	B2	20080416		
PRIORITY APPLN. INFO.:			JP 2002-222643	20020731

OTHER SOURCE(S): MARPAT 140:207471  
ED Entered STN: 26 Feb 2004  
GI



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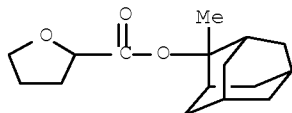


II

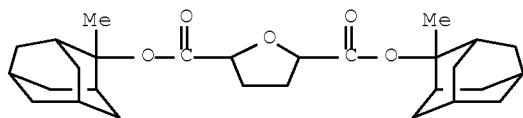
AB The additives I (R1 = C4-15 tert-alkyl, tert-cycloalkyl, tert-alkoxyalkyl, tert-cyclic ether, tert-cyclic ester) and II (R2-3 = H, C4-15 tert-alkyl, tert-cycloalkyl, tert-alkoxyalkyl, tert-cyclic ether, tert-cyclic ester; R2 ≠

R3  $\neq$  H) are claimed. The resist composition essentially contains (A) the above additive, (B) a polymer becoming soluble in alkali by the action of an acid, (C) a photoacid generator and (D) solvent dissolving A, B, and C. The composition shows high transparency to ArF excimer laser and shows high resolution and dry etching property.

IT 663603-31-4 663603-32-5  
 (photoresist composition containing THF carboxylate additive)  
 RN 663603-31-4 HCAPLUS  
 CN 2-Furancarboxylic acid, tetrahydro-,  
 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester (CA INDEX NAME)



RN 663603-32-5 HCAPLUS  
 CN Hexaric acid, 2,5-anhydro-3,4-dideoxy-,  
 bis(2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl) ester (9CI) (CA INDEX NAME)



IC ICM G03F007-004  
 ICS G03F007-039; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 IT 663603-30-3 663603-31-4 663603-32-5  
 (photoresist composition containing THF carboxylate additive)

L50 ANSWER 21 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2003:1007693 HCAPLUS Full-text

DOCUMENT NUMBER: 140:50320

TITLE: Photoresist composition for  
 deep ultraviolet lithography  
 comprising a mixture of photoactive compounds

INVENTOR(S): Padmanaban, Munirathna; Kudo, Takanori; Lee,  
 Sangho; Dammel, Ralph R.; Rahman, M. Dalil

PATENT ASSIGNEE(S): Az Electronic Materials Usa Corp., USA

SOURCE: U.S. Pat. Appl. Publ., 25 pp., Cont.-in-part of  
 U.S. Ser. No. 170,761.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20030235782	A1	20031225	US 2003-439472	20030516
US 6991888	B2	20060131		
US 20030235775	A1	20031225	US 2002-170761	20020613
CN 1659477	A	20050824	CN 2003-813607	20030611
PRIORITY APPLN. INFO.:			US 2002-170761	A2 20020613

OTHER SOURCE(S): MARPAT 140:50320

ED Entered STN: 28 Dec 2003

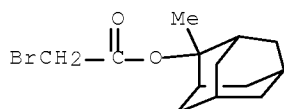
AB The present invention relates to a novel photoresist composition that can be developed with an aqueous alkaline solution, and is capable of being imaged at exposure wavelengths in the deep UV. The invention also relates to a process for imaging the novel photoresist as well as novel photoacid generators.

IT 625122-37-4

(preparation of photoactive compds. for photoresist composition for deep UV lithog.)

RN 625122-37-4 HCAPLUS

CN Acetic acid, 2-bromo-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester (CA INDEX NAME)



IC ICM G03F007-038

ICS C07D327-10; C07C323-16; C07C022-00

INCL 430270100; X56-8 3.9; X54-9 1.0; X57-018.2

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

ST photoresist compn deep UV lithog

mixt photoactive compd

IT Photolithography

(UV; photoresist composition for deep

UV lithog. comprising mixture of photoactive compds.)

IT Photoresists

(photoresist composition for deep UV

lithog. comprising mixture of photoactive compds.)

IT 7379-41-1P

(photoresist composition for deep UV

lithog. comprising mixture of photoactive compds.)

IT 636597-00-7P

(photoresist composition for deep UV

lithog. comprising mixture of photoactive compds.)

IT 158328-44-0P 177080-68-1P 206861-50-9P 214149-84-5P

636596-99-1P 636597-02-9P 636597-04-1P 636597-05-2P

636597-06-3P 636597-07-4P 636597-08-5P 636597-10-9P

(photoresist composition for deep UV

lithog. comprising mixture of photoactive compds.)

IT 474888-51-2

(photoresist composition for deep UV

lithog. comprising mixture of photoactive compds.)

IT 636597-09-6P

(photoresist composition for deep UV  
lithog. comprising mixture of photoactive compds.)

IT 67-68-5, Dimethylsulfoxide, reactions 1300-71-6, Dimethylphenol  
1879-16-9, 1-Methoxy-4-(methylthio)benzene 2923-28-6, Silver  
triflate 5292-43-3, tert-Butylbromoacetate 6258-60-2, 4-Methoxy  
benzyl mercaptan 29420-49-3 39847-39-7 60805-12-1 71735-31-4  
82113-65-3 152894-10-5 625122-37-4

(preparation of photoactive compds. for photoresist  
composition for deep UV lithog.)

REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

L50 ANSWER 22 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:1007247 HCAPLUS Full-text

DOCUMENT NUMBER: 140:50314

TITLE: Photoresist composition for  
deep ultraviolet lithography  
comprising a mixture of photoactive compounds

INVENTOR(S): Padmanaban, Munirathna; Kudo, Takanori; Lee,  
Sangho; Dammal, Ralph R.; Rahman, Dalil M.

PATENT ASSIGNEE(S): Clariant International Ltd., Switz.

SOURCE: PCT Int. Appl., 63 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
WO 2003107093	A2	20031224	WO 2003-EP6139	20030611
WO 2003107093	A3	20040401		
W: CN, JP, KR, SG				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,				
IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
US 20030235775	A1	20031225	US 2002-170761	20020613
EP 1516229	A2	20050323	EP 2003-759932	20030611
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,				
PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
CN 1659477	A	20050824	CN 2003-813607	20030611
JP 2005534952	T	20051117	JP 2004-513846	20030611
PRIORITY APPLN. INFO.:			US 2002-170761	A 20020613
			WO 2003-EP6139	W 20030611

OTHER SOURCE(S): MARPAT 140:50314

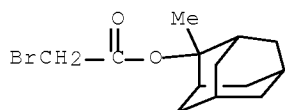
ED Entered STN: 26 Dec 2003

AB The present invention relates to a novel photoresist composition that can be  
developed with an aqueous alkaline solution, and is capable of being imaged at  
exposure wavelengths in the deep UV . The invention also relates to a process  
for imaging the novel photoresist as well as novel photoacid generators. The  
composition shows good sensitivity and provides a photoresist of reduced edge  
roughness.

IT 625122-37-4  
(photoresist composition for deep UV  
lithog. comprising a mixture of photoactive compds.)

RN 625122-37-4 HCAPLUS

CN Acetic acid, 2-bromo-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester (CA  
INDEX NAME)



IC ICM G03F007-00  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 ST photoresist compn deep UV lithog  
 IT Light-sensitive materials  
     Photoresists  
       (photoresist composition for deep UV lithog. comprising a mixture of photoactive compds.)  
 IT 636597-01-8P  
     (acid generator in photoresist composition)  
 IT 74-88-4, Iodomethane, reactions 1879-16-9,  
     1-Methoxy-4-(methylthio)benzene 2923-28-6, Silver triflate  
     5292-43-3, tert-Butyl bromoacetate 6258-60-2, 4-Methoxybenzyl  
     mercaptan 29420-49-3, Potassium perfluorobutanesulfonate  
     39847-39-7, Bis(perfluorobutylsulfonyl)amine 60805-12-1  
     82113-65-3, Bis(trifluoromethanesulfonyl)amine 129318-46-3D,  
     Bis(perfluoroethylsulfonyl)imide, lithium salt 625122-37-4  
     (photoresist composition for deep UV lithog. comprising a mixture of photoactive compds.)  
 IT 7379-41-1P  
     (photoresist composition for deep UV lithog. comprising a mixture of photoactive compds.)  
 IT 67-68-5P, Dimethylsulfoxide, preparation 95-87-4P,  
     2,5-Dimethylphenol 206861-50-9P 214149-84-5P 474888-51-2P  
     636596-99-1P 636597-00-7P 636597-03-0P 636597-05-2P  
     636597-06-3P 636597-07-4P 636597-08-5P  
     (photoresist composition for deep UV lithog. comprising a mixture of photoactive compds.)  
 IT 177080-68-1P, 2-Methyladamantyl methacrylate/Mevalonic lactone  
     methacrylate copolymer 636601-01-9P,  
     1-tert-Butylnorbornene-Mevalonic lactone  
     methacrylate-2-Methyl-2-adamantylmethacrylate-maleic anhydride  
     copolymer  
     (resin in photoresist composition)

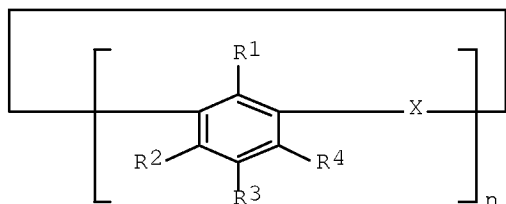
L50 ANSWER 23 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2002:867239 HCAPLUS Full-text  
 DOCUMENT NUMBER: 137:377437  
 TITLE: Positive working radiation polymerizable compositions  
 INVENTOR(S): Ueda, Mitsuru; Shibasaki, Yuji; Fujigaya, Takehiko; Kwon, Yong Gil  
 PATENT ASSIGNEE(S): Jsr Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
           CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002328473	A	20021115	JP 2001-134962	20010502
PRIORITY APPLN. INFO.:			JP 2001-134962	20010502

OTHER SOURCE(S): MARPAT 137:377437

ED Entered STN: 15 Nov 2002

GI



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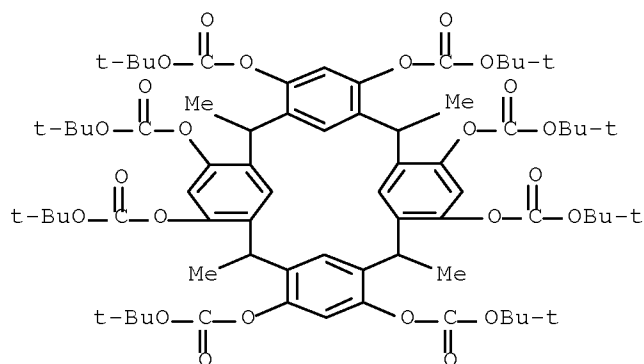
AB The compns. comprise (A) cyclic polyphenolic compds. I (R1-4 = H, OH, halo, alkyl, aryl, aralkyl, alkoxy, alkenyl, acyl, alkoxycarbonyl, alkyloxyloxy, aryloxyloxy, cyano, nitro;  $\geq 1$  of R1-4 is tert-butoxycarbonyloxy; X = direct bond, CR5R6; R5-6 = H, alkyl, aryl; n = integer of 3-8) and (B) radiation-sensitive acid generators. The compns. have high resolution and high sensitivity.

IT 250715-31-2P

(calixarene-acid generator compns. for pos.-working photoresists)

RN 250715-31-2 HCAPLUS

CN Carbonic acid, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl octakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



IC ICM G03F007-039

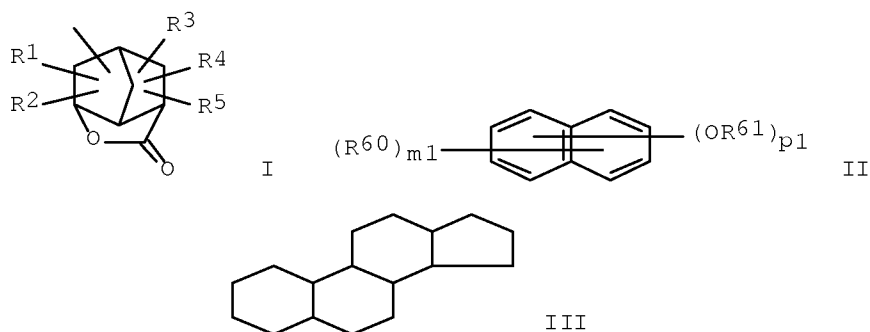


ICS G03F007-004; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38  
 IT 250715-31-2P  
 (calixarene-acid generator compns. for pos.-working photoresists)

L50 ANSWER 24 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2002:769997 HCAPLUS Full-text  
 DOCUMENT NUMBER: 137:302220  
 TITLE: Positive-working photoresist composition containing acid decomposable resin having lactone structure and polycyclic dissolution inhibitor containing protected carboxylic acid group  
 INVENTOR(S): Uenishi, Kazuya; Aogo, Toshiaki; Sato, Kenichiro  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 79 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2002296779	A	20021009	JP 2001-100300	20010330
JP 4117112	B2	20080716		
TW 594411	B	20040621	TW 2002-91106292	20020329
KR 773336	B1	20071105	KR 2002-17575	20020330
US 20030031950	A1	20030213	US 2002-109872	20020401
US 6962766	B2	20051108		
PRIORITY APPLN. INFO.:			JP 2001-100300	A 20010330

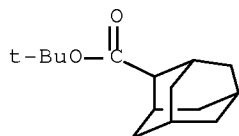
ED Entered STN: 10 Oct 2002  
 GI



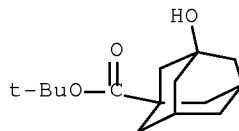
AB The pos.-working photoresist composition comprises (a) a photoacid, (b) a resin having sp. lactone structures which decomp. upon contacting an acid, for example, I (R1-5 = H, alkyl, cycloalkyl, alkenyl), resulting in increasing the alkaline solubility, and (c)  $\geq 1$  protected carboxylic acid group-containing polycyclic dissoln. inhibitor represented by R[X(CR51R52)q1COOR']n1, II

(R51,52 = H, alkyl; R' = acid decomposable group; R = bridged hydrocarbon, unsatd. hydrocarbon, n1 valent residue including naphthalene ring; n1 = integer 1-4; q1 = integer 0-10; R60 = alkyl, halo; R61 = acid decomposable group; m1 = integer 0-4; and p1 = integer 1-4), and III. The pos.-working photoresist composition provided excellent resolution in trench and contact hole in a semiconductor device fabrication.

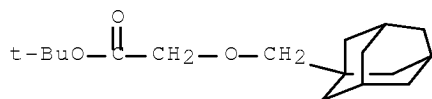
IT 207512-00-3 421555-75-1 421555-78-4  
 455901-88-9 469886-36-0  
 (dissoln. inhibitor; pos.-working photoresist  
 composition containing)  
 RN 207512-00-3 HCAPLUS  
 CN Tricyclo[3.3.1.1<sup>3,7</sup>]decane-2-carboxylic acid, 1,1-dimethylethyl ester  
 (CA INDEX NAME)



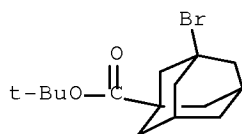
RN 421555-75-1 HCAPLUS  
 CN Tricyclo[3.3.1.1<sup>3,7</sup>]decane-1-carboxylic acid, 3-hydroxy-,  
 1,1-dimethylethyl ester (CA INDEX NAME)



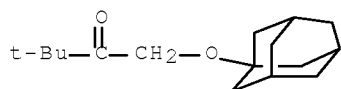
RN 421555-78-4 HCAPLUS  
 CN Acetic acid, 2-(tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylmethoxy)-,  
 1,1-dimethylethyl ester (CA INDEX NAME)



RN 455901-88-9 HCAPLUS  
 CN Tricyclo[3.3.1.1<sup>3,7</sup>]decane-1-carboxylic acid, 3-bromo-,  
 1,1-dimethylethyl ester (CA INDEX NAME)



RN 469886-36-0 HCAPLUS  
 CN 2-Butanone, 3,3-dimethyl-1-(tricyclo[3.3.1.13,7]dec-1-yloxy)- (CA  
 INDEX NAME)



IC ICM G03F007-039  
 ICS C08K005-00; C08L101-00; G03F007-004; G03F007-20; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 76  
 IT 115298-62-9 115311-03-0 130782-09-1 172615-57-5  
 207512-00-3 251365-75-0 421555-75-1  
 421555-78-4 421555-80-8 421555-83-1 455901-88-9  
 469886-35-9 469886-36-0 469886-40-6  
 (dissoln. inhibitor; pos.-working photoresist  
 composition containing)

L50 ANSWER 25 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2002:636853 HCAPLUS Full-text  
 DOCUMENT NUMBER: 137:177114  
 TITLE: Chemically amplified x-ray photoresists  
 compositions with high sensitivity and resolution  
 INVENTOR(S): Kodama, Kunihiro  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 73 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002236358	A	20020823	JP 2001-32855	20010208
JP 4145017	B2	20080903		
KR 796585	B1	20080121	KR 2002-5898	20020201
TW 571178	B	20040111	TW 2002-91101972	20020205
PRIORITY APPLN. INFO.:			JP 2001-32855	A 20010208
			JP 2001-33923	A 20010209

OTHER SOURCE(S): MARPAT 137:177114  
 ED Entered STN: 23 Aug 2002

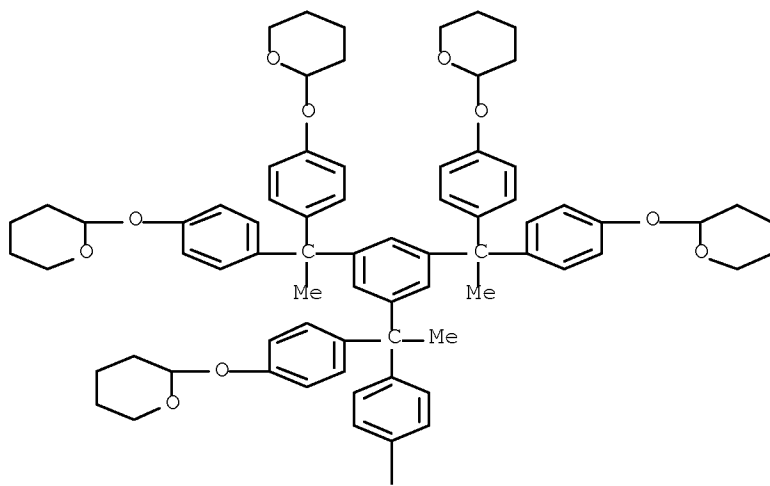
AB The compns. contain photoacid generators (PAG), which are decomposed by intramol. H radical transfer on irradiation

IT 196709-88-3P  
(dissolving inhibition agents; chemical amplified x-ray photoresists compns. with high sensitivity and resolution)

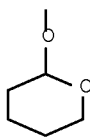
RN 196709-88-3 HCAPLUS

CN 2H-Pyran, 2,2',2'',2''',2''''',2''''''-[1,3,5-benzenetriyltris[ethylidynebis(4,1-phenyleneoxy)]]hexakis[tetrahydro-(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



IC ICM G03F007-004

ICS G03F007-004; C08K005-10; C08K005-36; C08L101-00; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 196709-88-3P  
(dissolving inhibition agents; chemical amplified x-ray photoresists compns. with high sensitivity and resolution)

L50 ANSWER 26 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:347848 HCAPLUS Full-text

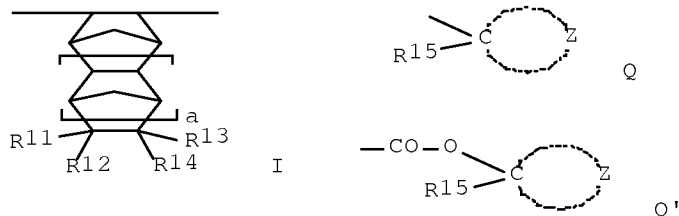
DOCUMENT NUMBER: 136:361828

TITLE: Positive-working photoresist compositions

INVENTOR(S): Sato, Kenichiro; Nakao, Hajime  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 80 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002131917	A	20020509	JP 2001-169802	20010605
TW 548521	B	20030821	TW 2001-90113799	20010607
KR 763432	B1	20071004	KR 2001-31939	20010608
PRIORITY APPLN. INFO.:			JP 2000-174037	A 20000609
			JP 2000-186431	A 20000621
			JP 2000-206812	A 20000707
			JP 2000-206890	A 20000707
			JP 2000-211414	A 20000712
			JP 2000-215441	A 20000717
			JP 2000-248658	A 20000818

OTHER SOURCE(S): MARPAT 136:361828  
 ED Entered STN: 09 May 2002  
 GI



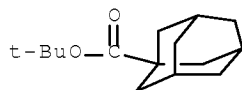
AB The compns., which show wide defocus latitude, reduced line edge roughness, and high resolution, contain (A) resin which increases its solubility in alkaline developers upon reaction of acids and contain (a) a repeating unit I [R11-R14 = H, (un)substituted alkyl; a = 0, 1] and (b) CH<sub>2</sub>CR1(ACO<sub>2</sub>W) (R1 = H, Me; A = direct bond, alkylene, cycloalkylene, O, ether group, thioether group, O, ester group; W = Q, CR16R17R18, CHR20OR19, CR23R25CR21:CR22R24, R26R29CHR27COR28, Q1; R15 = Me, Et, Pr, CHMe<sub>2</sub>, Bu, CH<sub>2</sub>CMe<sub>2</sub>, CHMeEt; Z = atomic group required to form an alicyclic ring; R16-R20 = C1-4 linear or branched alkyl, alicycllyl; ≥1 of R16-R18, R19 or R20 = alicycllyl; R21-R25 = H, C1-4 linear or branched alkyl, alicycllyl; ≥1 R21-R25 = alicycllyl; R23 or R25 = C1-4

linear or branched alkyl, alicyclyl; R26-R29 = C1-4 linear or branched alkyl, alicyclyl;  $\geq 1$  of R26-R29 = alicyclyl), (B) compds. which generate acids upon irradiation of actinic ray or radiation, and optionally (C1)  $R[X(CR51CR52)qCO2R1]n$  ( $X = O, S, NR53$ , direct bond,  $R53 = H$ , alkyl;  $CO2R1$  = acid-decomposable group;  $R = n$ -valent bridged hydrocarbon ring, saturated cyclic hydrocarbon ring, naphthalene ring;  $n = 1-4$ ;  $q = 0-10$ ), (C2) naphthalene derivs. II ( $R60 = \text{alkyl, halo}$ ;  $OR61 = \text{acid-decomposable group}$ ;  $m = 0-4$ ;  $p = 1-4$ ), or (C3) steroid compds. which contain  $\geq 2$  substituents having  $\geq 1$  carboxyl group protected with acid-labile group. The acid generators may be imide sulfonate compds. or diazodisulfonic acids (Markush structures are given) and optionally sulfonium salts. (C1)-(C3) work as dissoln. inhibitors and the compns. give high-resolution contact hole and trench patterns in fabrication of semiconductor devices.

IT 24556-20-5 207512-00-3 343223-56-3  
 421555-75-1 421555-76-2 421555-78-4  
 (dissoln. inhibitor; pos.-working photoresist  
 compns. containing norbornene-acrylate copolymers)

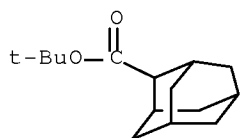
RN 24556-20-5 HCAPLUS

CN Tricyclo[3.3.1.1<sup>3,7</sup>]decane-1-carboxylic acid, 1,1-dimethylethyl ester  
 (CA INDEX NAME)



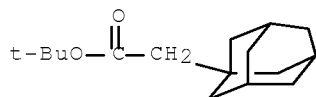
RN 207512-00-3 HCAPLUS

CN Tricyclo[3.3.1.1<sup>3,7</sup>]decane-2-carboxylic acid, 1,1-dimethylethyl ester  
 (CA INDEX NAME)



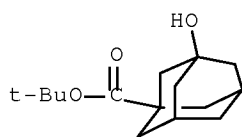
RN 343223-56-3 HCAPLUS

CN Tricyclo[3.3.1.1<sup>3,7</sup>]decane-1-acetic acid, 1,1-dimethylethyl ester (CA  
 INDEX NAME)



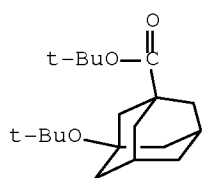
RN 421555-75-1 HCAPLUS

CN Tricyclo[3.3.1.1<sup>3,7</sup>]decane-1-carboxylic acid, 3-hydroxy-,  
 1,1-dimethylethyl ester (CA INDEX NAME)



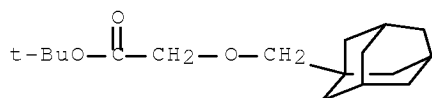
RN 421555-76-2 HCAPLUS

CN Tricyclo[3.3.1.1.3,7]decane-1-carboxylic acid, 3-(1,1-dimethylethoxy)-, 1,1-dimethylethyl ester (CA INDEX NAME)



RN 421555-78-4 HCAPLUS

CN Acetic acid, 2-(tricyclo[3.3.1.1.3,7]dec-1-ylmethoxy)-, 1,1-dimethylethyl ester (CA INDEX NAME)



IT 249562-07-0P 249562-17-2P, Maleic  
anhydride-2-methyl-2-adamantyl acrylate-norbornene copolymer  
351867-96-4P 421555-59-1P 421555-60-4P  
421555-61-5P 421555-62-6P 421555-63-7P  
421555-64-8P 421555-65-9P 421555-66-0P  
421555-67-1P

(pos.-working photoresist compns. containing  
norbornene-acrylate copolymers)

RN 249562-07-0 HCAPLUS

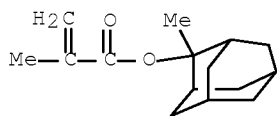
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1.3,7]dec-2-yl  
ester, polymer with bicyclo[2.2.1]hept-2-ene and 2,5-furandione (9CI)  
(CA INDEX NAME)

CM 1

CRN 177080-67-0

CMF C15 H22 O2

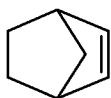
10/594,282



CM 2

CRN 498-66-8

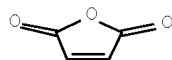
CMF C7 H10



CM 3

CRN 108-31-6

CMF C4 H2 O3



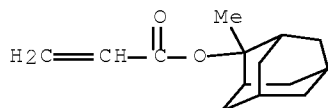
RN 249562-17-2 HCAPLUS

CN 2-Propenoic acid, 2-methyltricyclo[3.3.1.1.3,7]dec-2-yl ester, polymer  
with bicyclo[2.2.1]hept-2-ene and 2,5-furandione (9CI) (CA INDEX  
NAME)

CM 1

CRN 249562-06-9

CMF C14 H20 O2



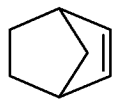
CM 2

CRN 498-66-8



10/594,282

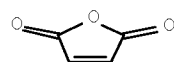
CMF C7 H10



CM 3

CRN 108-31-6

CMF C4 H2 O3



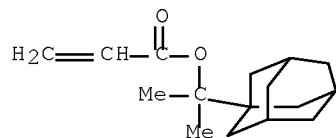
RN 351867-96-4 HCAPLUS

CN 2-Propenoic acid, 1-methyl-1-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylethyl ester,  
polymer with bicyclo[2.2.1]hept-2-ene and 2,5-furandione (9CI) (CA  
INDEX NAME)

CM 1

CRN 300833-10-7

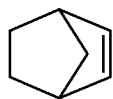
CMF C16 H24 O2



CM 2

CRN 498-66-8

CMF C7 H10

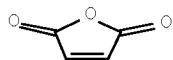


10/594,282

CM 3

CRN 108-31-6

CMF C4 H2 O3



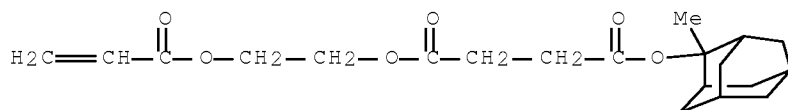
RN 421555-59-1 HCAPLUS

CN Butanedioic acid, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl  
2-[(1-oxo-2-propenyl)oxy]ethyl ester, polymer with  
bicyclo[2.2.1]hept-2-ene and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 421555-58-0

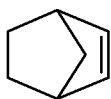
CMF C20 H28 O6



CM 2

CRN 498-66-8

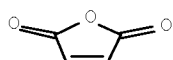
CMF C7 H10



CM 3

CRN 108-31-6

CMF C4 H2 O3



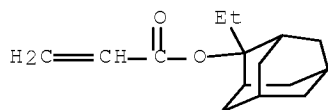
RN 421555-60-4 HCAPLUS

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with  
bicyclo[2.2.1]hept-2-ene, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl  
2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 303186-14-3

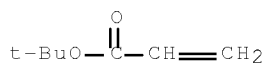
CMF C15 H22 O2



CM 2

CRN 1663-39-4

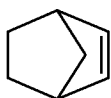
CMF C7 H12 O2



CM 3

CRN 498-66-8

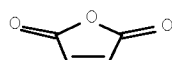
CMF C7 H10



CM 4

CRN 108-31-6

CMF C4 H2 O3



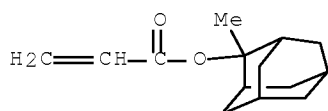
RN 421555-61-5 HCAPLUS

CN 2-Propenoic acid, 2-methoxyethyl ester, polymer with 2,5-furandione,  
2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-propenoate and  
1,2,3,4,4a,5,8,8a-octahydro-1,4:5,8-dimethanonaphthalene (9CI) (CA  
INDEX NAME)

CM 1

CRN 249562-06-9

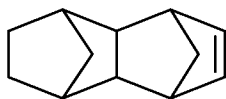
CMF C14 H20 O2



CM 2

CRN 21635-90-5

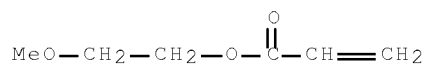
CMF C12 H16



CM 3

CRN 3121-61-7

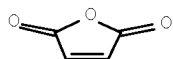
CMF C6 H10 O3



CM 4

CRN 108-31-6

CMF C4 H2 O3



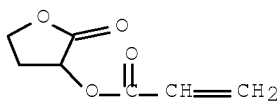
RN 421555-62-6 HCAPLUS

CN 2-Propenoic acid, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer  
with bicyclo[2.2.1]hept-2-ene, 2,5-furandione and  
tetrahydro-2-oxo-3-furanyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 328249-37-2

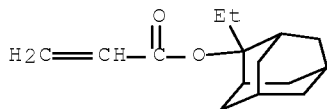
CMF C7 H8 O4



CM 2

CRN 303186-14-3

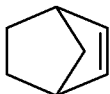
CMF C15 H22 O2



CM 3

CRN 498-66-8

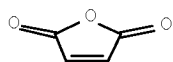
CMF C7 H10



CM 4

CRN 108-31-6

CMF C4 H2 O3



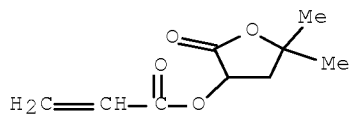
RN 421555-63-7 HCAPLUS

CN 2-Propenoic acid, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer  
with bicyclo[2.2.1]hept-2-ene, 2,5-furandione and  
tetrahydro-5,5-dimethyl-2-oxo-3-furanyl 2-propenoate (9CI) (CA INDEX  
NAME)

CM 1

CRN 276874-08-9

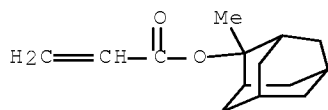
CMF C9 H12 O4



CM 2

CRN 249562-06-9

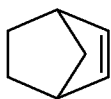
CMF C14 H20 O2



CM 3

CRN 498-66-8

CMF C7 H10

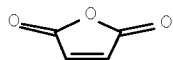


10/594,282

CM 4

CRN 108-31-6

CMF C4 H2 O3



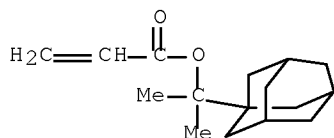
RN 421555-64-8 HCAPLUS

CN 2-Propenoic acid, 1-methyl-1-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylethyl ester, polymer with bicyclo[2.2.1]hept-2-ene, 2,5-furandione and tetrahydro-5-oxo-3-furanyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 300833-10-7

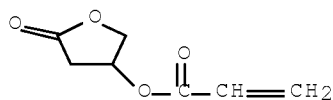
CMF C16 H24 O2



CM 2

CRN 130225-01-3

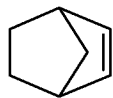
CMF C7 H8 O4



CM 3

CRN 498-66-8

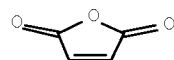
CMF C7 H10



CM 4

CRN 108-31-6

CMF C4 H2 O3



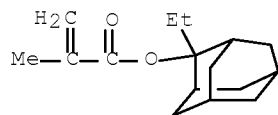
RN 421555-65-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl  
 ester, polymer with bicyclo[2.2.1]hept-2-ene and 2,5-furandione (9CI)  
 (CA INDEX NAME)

CM 1

CRN 209982-56-9

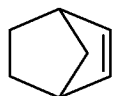
CMF C16 H24 O2



CM 2

CRN 498-66-8

CMF C7 H10

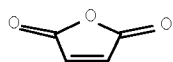


CM 3

CRN 108-31-6



CMF C4 H2 O3



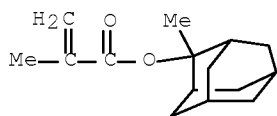
RN 421555-66-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with bicyclo[2.2.1]hept-2-ene, butyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

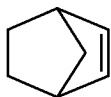
CMF C15 H22 O2



CM 2

CRN 498-66-8

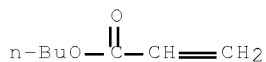
CMF C7 H10



CM 3

CRN 141-32-2

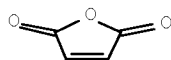
CMF C7 H12 O2



CM 4

10/594,282

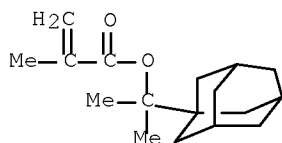
CRN 108-31-6  
CMF C4 H2 O3



RN 421555-67-1 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-methoxyethyl ester, polymer with bicyclo[2.2.1]hept-2-ene, 2,5-furandione and 1-methyl-1-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

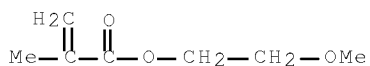
CM 1

CRN 279218-76-7  
CMF C17 H26 O2



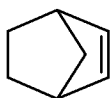
CM 2

CRN 6976-93-8  
CMF C7 H12 O3



CM 3

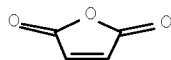
CRN 498-66-8  
CMF C7 H10



CM 4

CRN 108-31-6

CMF C4 H2 O3



IC ICM G03F007-039  
ICS C08F232-08; G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 24556-20-5 115298-62-9 115311-03-0 130782-09-1  
172615-57-5 207512-00-3 244634-41-1 343223-56-3  
421555-75-1 421555-76-2 421555-77-3  
421555-78-4 421555-79-5 421555-80-8 421555-81-9  
421555-82-0 421555-83-1 421555-84-2  
(dissoln. inhibitor; pos.-working photoresist  
compns. containing norbornene-acrylate copolymers)

IT 249562-07-0P 249562-17-2P, Maleic  
anhydride-2-methyl-2-adamantyl acrylate-norbornene copolymer  
260448-02-0P, tert-Butyl acrylate-maleic anhydride-norbornene  
copolymer 351867-96-4P 421555-57-9P 421555-59-1P  
421555-60-4P 421555-61-5P 421555-62-6P  
421555-63-7P 421555-64-8P 421555-65-9P  
421555-66-0P 421555-67-1P  
(pos.-working photoresist compns. containing  
norbornene-acrylate copolymers)

L50 ANSWER 27 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:314503 HCAPLUS Full-text

DOCUMENT NUMBER: 136:348304

TITLE: Positive photosensitive composition

INVENTOR(S): Kodama, Kunihiro; Aoi, Toshiaki

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 148 pp.  
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1199603	A1	20020424	EP 2001-124329	20011019
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2002131897	A	20020509	JP 2000-321128	20001020
JP 2002214774	A	20020731	JP 2001-132546	20010427
JP 4150509	B2	20080917		
US 20020102491	A1	20020801	US 2001-978103	20011017
US 6749987	B2	20040615		
TW 536663	B	20030611	TW 2001-90125903	20011019
KR 795872	B1	20080121	KR 2001-64821	20011019
US 20050130060	A1	20050616	US 2004-866054	20040614

10/594,282

US 7435526	B2	20081014		
US 20070003871	A1	20070104	US 2006-512173	20060830
PRIORITY APPLN. INFO.:			JP 2000-321128	A 20001020
			JP 2000-352899	A 20001120
			JP 2001-132546	A 20010427
			US 2001-978103	A3 20011017
			US 2004-860054	A3 20040604

ED Entered STN: 26 Apr 2002

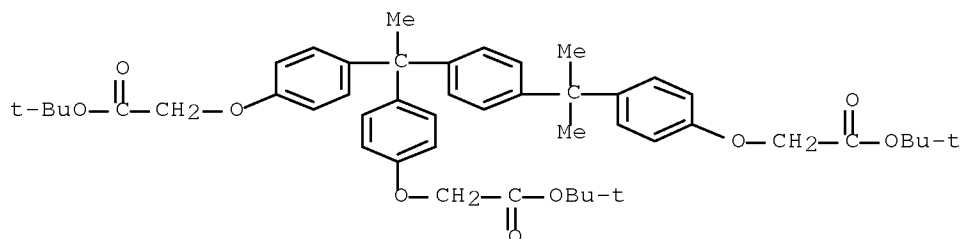
AB A pos. photosensitive composition comprises a compound capable of generating a specified sulfonic acid upon irradiation with one of an actinic ray and radiation and a resin capable of decomposing under the action of an acid to increase the solubility in an alkali developer.

IT 153698-54-5 153698-65-8 195000-67-0  
216308-45-1 250378-10-0 258879-87-7  
288303-55-9 297156-40-2 304441-22-3  
324770-96-9 357413-69-5 414911-87-8  
415920-54-6

(photo-acid generator used in pos. photoresist composition)

RN 153698-54-5 HCAPLUS

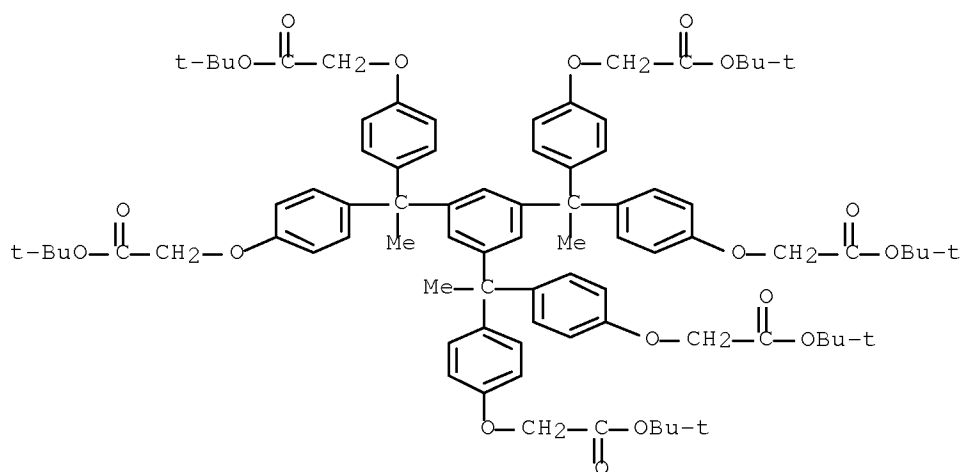
CN Acetic acid, 2,2'-[[1-[4-[1-[4-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl]-1-methylethyl]phenyl]ethylidene]bis(4,1-phenyleneoxy)]bis-, 1,1'-bis(1,1-dimethylethyl) ester (CA INDEX NAME)



RN 153698-65-8 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2''',2''''-[1,3,5-benzenetriyltris[ethylidenebis(4,1-phenyleneoxy)]]hexakis-, hexakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

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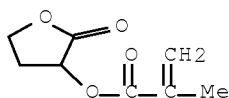
RN 195000-67-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 195000-66-9

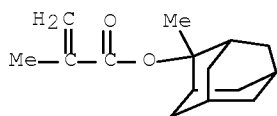
CMF C8 H10 O4



CM 2

CRN 177080-67-0

CMF C15 H22 O2



RN 216308-45-1 HCAPLUS

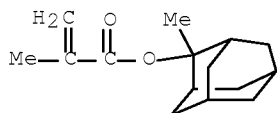
CN 2-Propenoic acid, 2-methyl-, polymer with 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-methyl-2-propenoate and tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

10/594,282

CM 1

CRN 177080-67-0

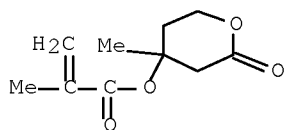
CMF C15 H22 O2



CM 2

CRN 177080-66-9

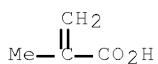
CMF C10 H14 O4



CM 3

CRN 79-41-4

CMF C4 H6 O2



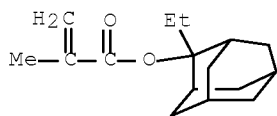
RN 250378-10-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1.3]dec-2-yl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 209982-56-9

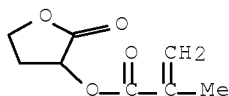
CMF C16 H24 O2



CM 2

CRN 195000-66-9

CMF C8 H10 O4



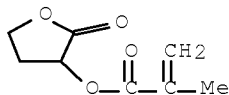
RN 258879-87-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.13,7]dec-1-yl  
 ester, polymer with 2-methyltricyclo[3.3.1.13,7]dec-2-yl  
 2-methyl-2-propenoate and tetrahydro-2-oxo-3-furanyl  
 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 195000-66-9

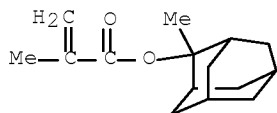
CMF C8 H10 O4



CM 2

CRN 177080-67-0

CMF C15 H22 O2

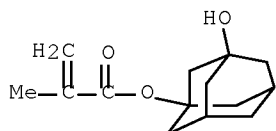


10/594,282

CM 3

CRN 115372-36-6

CMF C14 H20 O3



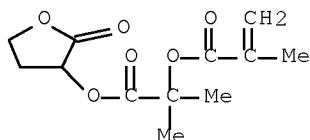
RN 288303-55-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with  
1,1-dimethyl-2-oxo-2-[(tetrahydro-2-oxo-3-furanyl)oxy]ethyl  
2-methyl-2-propenoate and 2-methyltricyclo[3.3.1.3<sup>1,7</sup>]dec-2-yl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 288303-54-8

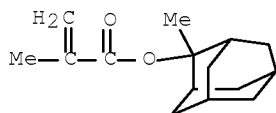
CMF C12 H16 O6



CM 2

CRN 177080-67-0

CMF C15 H22 O2

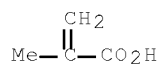


CM 3

CRN 79-41-4

CMF C4 H6 O2





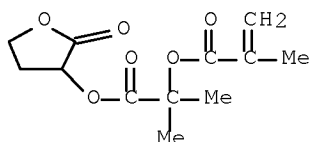
RN 297156-40-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethyl-2-oxo-2-[(tetrahydro-2-oxo-3-furanyl)oxy]ethyl ester, polymer with 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 288303-54-8

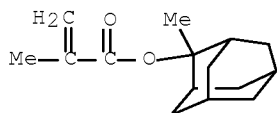
CMF C12 H16 O6



CM 2

CRN 177080-67-0

CMF C15 H22 O2



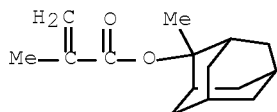
RN 304441-22-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(2-methoxyethoxy)ethyl ester, polymer with 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-methyl-2-propenoate and tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

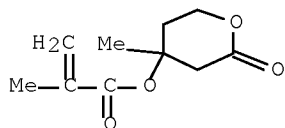
CMF C15 H22 O2



CM 2

CRN 177080-66-9

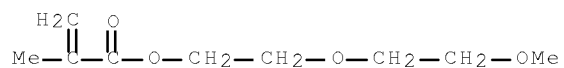
CMF C10 H14 O4



CM 3

CRN 45103-58-0

CMF C9 H16 O4



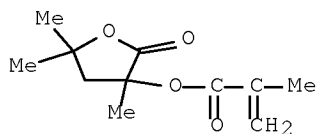
RN 324770-96-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1.3]dec-2-yl ester, polymer with tetrahydro-3,5,5-trimethyl-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 324761-21-9

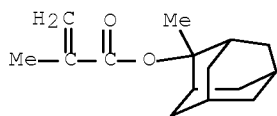
CMF C11 H16 O4



CM 2

CRN 177080-67-0

CMF C15 H22 O2



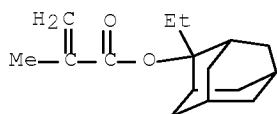
RN 357413-69-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-4,4-dimethyl-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 209982-56-9

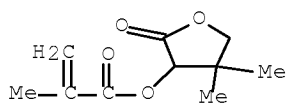
CMF C16 H24 O2



CM 2

CRN 156938-13-5

CMF C10 H14 O4



RN 414911-87-8 HCAPLUS

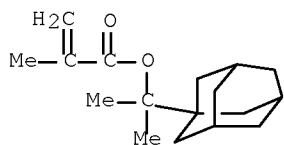
CN 2-Propenoic acid, 2-methyl-, 1-methyl-1-tricyclo[3.3.1.13,7]dec-1-ylethyl ester, polymer with 3-hydroxytricyclo[3.3.1.13,7]dec-1-yl 2-propenoate and tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 279218-76-7

CMF C17 H26 O2

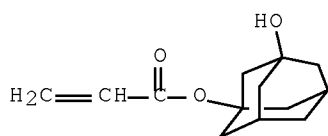
10/594,282



CM 2

CRN 216581-76-9

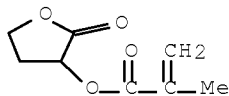
CMF C13 H18 O3



CM 3

CRN 195000-66-9

CMF C8 H10 O4



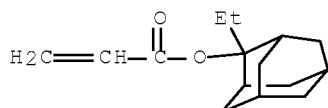
RN 415920-54-6 HCAPLUS

CN Cholan-24-oic acid, 3-[(3-carboxy-1-oxo-2-propenyl)oxy]-, (3 $\alpha$ ,5 $\beta$ )-, polymer with 1,1-dimethylethyl bicyclo[2.2.1]hept-5-ene-2-carboxylate, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 303186-14-3

CMF C15 H22 O2

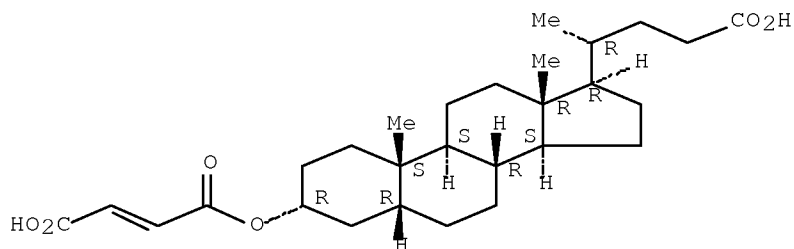


CM 2

CRN 212580-39-7

CMF C28 H42 O6

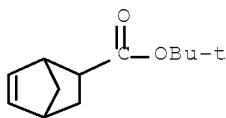
Absolute stereochemistry.  
Double bond geometry unknown.



CM 3

CRN 154970-45-3

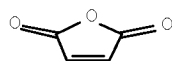
CMF C12 H18 O2



CM 4

CRN 108-31-6

CMF C4 H2 O3



IT 177080-68-1

(photo-decomposable resin in pos. photoresist  
composition)

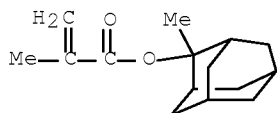
RN 177080-68-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl  
ester, polymer with tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl  
2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 177080-67-0

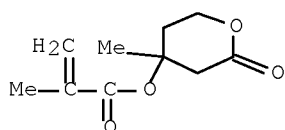
CMF C15 H22 O2



CM 2

CRN 177080-66-9

CMF C10 H14 O4



IC ICM G03F007-004

ICS G03F007-039; C07C309-06; C07C381-12

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 19600-49-8 24979-69-9, Poly(m-Hydroxystyrene) 24979-74-6,  
 p-Hydroxystyrene-styrene copolymer 66003-78-9 133710-62-0  
 138529-81-4 144317-44-2 153698-54-5 153698-63-6  
 153698-65-8 177034-80-9 195000-67-0 195154-83-7  
 197447-16-8 216308-45-1 241806-75-7 250378-10-0  
 258341-98-9 258872-05-8 258879-87-7 260448-02-0  
 288303-55-9 297156-40-2 301153-77-5 301664-71-1  
 304441-22-3 324770-96-9 357413-69-5  
 357413-71-9 359434-70-1 359434-73-4 376357-89-0 389859-76-1  
 398141-18-9 398141-19-0 414911-28-7 414911-29-8 414911-31-2  
 414911-32-3 414911-33-4 414911-34-5 414911-35-6 414911-36-7  
 414911-37-8 414911-39-0 414911-40-3 414911-42-5 414911-43-6  
 414911-45-8 414911-47-0 414911-48-1 414911-50-5 414911-51-6  
 414911-52-7 414911-54-9 414911-56-1 414911-58-3 414911-60-7  
 414911-63-0 414911-65-2 414911-67-4 414911-69-6 414911-71-0  
 414911-73-2 414911-75-4 414911-76-5 414911-77-6 414911-79-8  
 414911-81-2 414911-82-3 414911-83-4 414911-85-6 414911-86-7  
 414911-87-8 414911-88-9 415916-79-9 415916-81-3  
 415916-83-5 415916-84-6 415920-53-5 415920-54-6

(photo-acid generator used in pos. photoresist  
 composition)

IT 177080-68-1

(photo-decomposable resin in pos. photoresist

(composition)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

L50 ANSWER 28 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2001:469377 HCAPLUS Full-text  
DOCUMENT NUMBER: 135:84299  
TITLE: Positive-working photoresist compositions  
comprising alkaline-soluble silsesquioxanes  
INVENTOR(S): Mizutani, Kazuyoshi; Yasunami, Shoichiro  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 45 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2001174998	A	20010629	JP 1999-354710	19991214
US 20010038967	A1	20011108	US 2000-729178	20001205
US 6346363	B2	20020212		
TW 523639	B	20030311	TW 2000-89125898	20001205
PRIORITY APPLN. INFO.:			JP 1999-346316	A 19991206
			JP 1999-354710	A 19991214

ED Entered STN: 29 Jun 2001

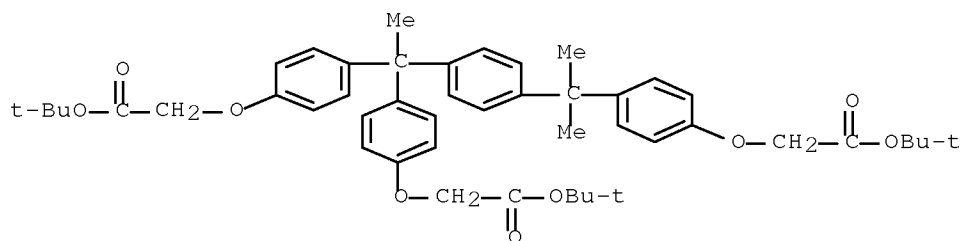
AB The compns. contain silsesquioxanes having structural repeating unit  
[Si(LXZ)O3/2] (L = ANHCO, ANHCO2, ANHCONH; A = single bond, alkylene, arylene;  
X = single bond, bivalent bond; Z = C6H5-l(OH)l, CY3-m[C6H5-l(OH)l,m; Y = H,  
linear, branched, or cyclic alkyl, aryl, or aralkyl; l, m = integer of 1-3).  
Also claimed are pos. photoresist compns. containing (a) the above stated  
silsesquioxanes, (b) photoacid generators, and (c1) phenolic compds. which  
their phenolic OH groups are completely protected with acid-decomposing groups  
or (c2) aromatic or aliphatic carboxylic acids which their carboxyl groups are  
completely protected with acid-decomposing groups. The compns. have high  
sensitivity and high resolution and are especially suitable for use as upper-  
layer resists in bilayered resists used for fabrication of semiconductor  
devices, liquid crystal displays, etc.

IT 153698-54-5

(pos.-working photoresist compns. comprising  
alkaline-soluble amide group-containing silsesquioxanes)

RN 153698-54-5 HCAPLUS

CN Acetic acid, 2,2'-[[1-[4-[1-[4-[2-(1,1-dimethylethoxy)-2-  
oxoethoxy]phenyl]-1-methylethyl]phenyl]ethylidene]bis(4,1-  
phenyleneoxy)]bis-, 1,1'-bis(1,1-dimethylethyl) ester (CA INDEX NAME)

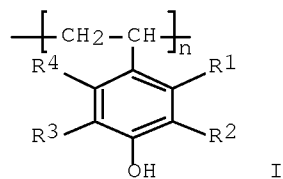


IC ICM G03F007-075  
 ICS C08L083-08; G03F007-039; H01L021-027; H05K003-06  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 38  
 IT 153698-54-5 153698-63-6 199432-82-1 346702-85-0  
 (pos.-working photoresist compns. comprising  
 alkaline-soluble amide group-containing silsesquioxanes)

L50 ANSWER 29 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2001:46103 HCAPLUS Full-text  
 DOCUMENT NUMBER: 134:123569  
 TITLE: Positive-working photoresist composition and  
 pattern-formation using it  
 INVENTOR(S): Yamanaka, Tsukasa  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 45 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001013685	A	20010119	JP 1999-181820	19990628
PRIORITY APPLN. INFO.:			JP 1999-181820	19990628

ED Entered STN: 19 Jan 2001  
 GI



AB The title photoresist composition contains (a) an alkali-soluble resin comprising repeating units [CH<sub>2</sub>CH(C<sub>6</sub>H<sub>4</sub>OH-p)]<sub>m</sub>, I, and [CH<sub>2</sub>CHX]<sub>k</sub> [R<sub>1</sub>-4 = H, X = aromatic substituent; 0.3 ≤ m ≤ 0.90; 0.05 ≤ n ≤ 0.30; 0.05 ≤ k ≤ 0.40], (b) a compound having groups that are cleaved by the action of acid, (c) a compound



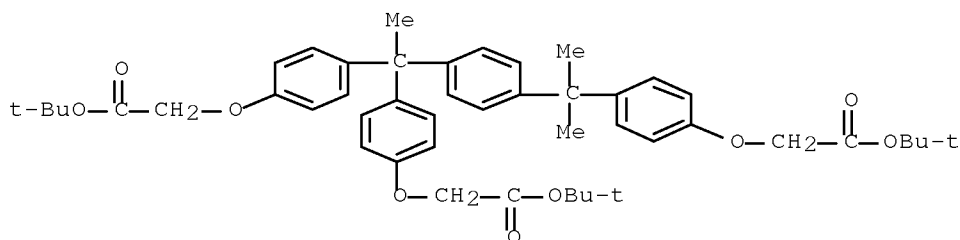
generating an acid by irradiation with actinic rays or radiation, and (d) an organic basic compound. The composition is applied on a substrate, patternwise exposed, baked, and developed with 2.38% aqueous Me<sub>4</sub>NOH solution to form a resist pattern. The composition shows high sensitivity toward actinic rays or radiation, especially far UV radiation, developability, and thermal resistance and provides high resolution patterns with good profile.

IT 153698-54-5

(acid decomposable compound; pos. photoresist compn  
. containing alkali-soluble resin, acid-decomposable compound, acid generator, and basic compound)

RN 153698-54-5 HCAPLUS

CN Acetic acid, 2,2'-[[1-[4-[1-[4-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl]-1-methylethyl]phenyl]ethylidene]bis(4,1-phenyleneoxy)]bis-, 1,1'-bis(1,1-dimethylethyl) ester (CA INDEX NAME)



IC ICM G03F007-039

ICS C08F002-46; C08L025-18; G03F007-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 153698-54-5 153698-63-6

(acid decomposable compound; pos. photoresist compn  
. containing alkali-soluble resin, acid-decomposable compound, acid generator, and basic compound)

L50 ANSWER 30 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:686614 HCAPLUS Full-text

DOCUMENT NUMBER: 133:274251

TITLE: Positively-working photoresist composition for far-ultraviolet ray photolithography

INVENTOR(S): Kodama, Kunihiro; Sato, Kenichiro; Aogo, Toshiaki

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 62 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 2

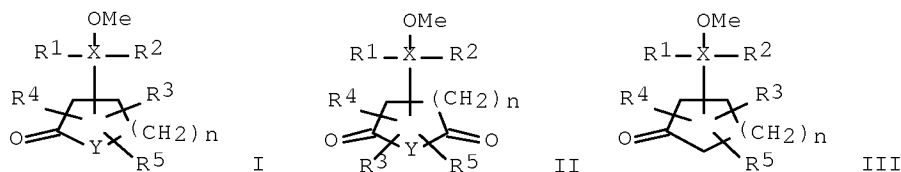
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000267287	A	20000929	JP 1999-186809	19990630
JP 3982950	B2	20070926		
KR 2000011988	A	20000225	KR 1999-30510	19990727
US 6291130	B1	20010918	US 1999-361568	19990727
US 6517991	B1	20030211	US 2000-606681	20000630

10/594,282

US 20030044718	A1	20030306	US 2002-176067	20020621
US 20040161697	A2	20040819		
US 6818377	B2	20041116		
PRIORITY APPLN. INFO.:			JP 1998-263392	A 19980917
			JP 1999-6662	A 19990113
			JP 1998-211137	A 19980727
			JP 1999-186809	A 19990630
			US 1999-361568	A3 19990727
			US 2000-606681	A3 20000630

ED Entered STN: 29 Sep 2000  
GI



AB The composition contains a compound discharging acids under active ray or radiation irradiation and a polymer whose solubility in alkaline developer is enhanced because of decomposition of the polymer by the resulting acids. The polymer involves carboxyl-protecting alc. units I, II, and/or III [R1, R2 = H, (substituted) linear, branched, or cyclic alkyl; R1 and R2 may form single or polycyclic group which may contain O, S, N, ketone, ester, imide, or amide group; R3-R5 = H, (substituted) linear, branched, cyclic alkyl, alkoxy; 2 of R3-R5 may form single or polycyclic group as above; X = single bond, divalent group; X and R1 and/or R2 may form single or polycyclic group; Y = O, S, NH, N(OH), NR; R = alkyl; n = 1-3]. The far-UV-sensitive photoresist composition is suitable for semiconductor device fabrication, etc.

IT 280566-60-1P 288303-55-9P 297156-27-5P  
297156-40-2P 297156-44-6P 297156-46-8P  
297156-51-5P 297156-52-6P 297156-53-7P  
297156-55-9P 297156-57-1P 297156-58-2P

(far UV-sensitive photoresist composition  
containing protected carboxy-substituted polymer)

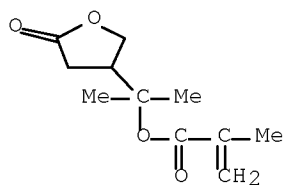
RN 280566-60-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-methyl-1-(tetrahydro-5-oxo-3-furanyl)ethyl ester, polymer with 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 280566-59-8  
CMF C11 H16 O4

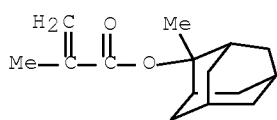
10/594,282



CM 2

CRN 177080-67-0

CMF C15 H22 O2



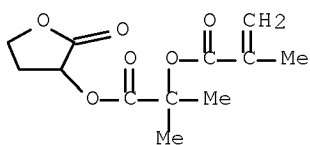
RN 288303-55-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with  
1,1-dimethyl-2-oxo-2-[(tetrahydro-2-oxo-3-furanyl)oxy]ethyl  
2-methyl-2-propenoate and 2-methyltricyclo[3.3.1.1.3,7]dec-2-yl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 288303-54-8

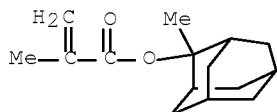
CMF C12 H16 O6



CM 2

CRN 177080-67-0

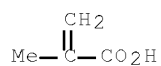
CMF C15 H22 O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



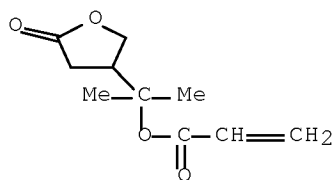
RN 297156-27-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-butyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 1-methyl-1-(tetrahydro-5-oxo-3-furanyl)ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 297156-26-4

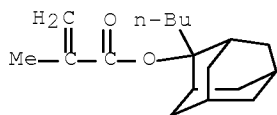
CMF C10 H14 O4



CM 2

CRN 209982-54-7

CMF C18 H28 O2



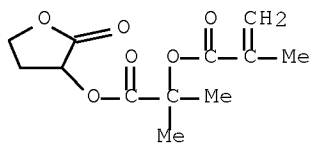
RN 297156-40-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethyl-2-oxo-2-[(tetrahydro-2-oxo-3-furanyl)oxy]ethyl ester, polymer with 2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

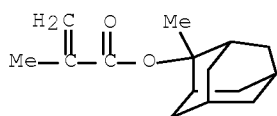
10/594,282

CRN 288303-54-8  
CMF C12 H16 O6



CM 2

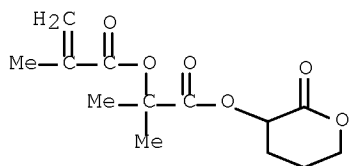
CRN 177080-67-0  
CMF C15 H22 O2



RN 297156-44-6 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethyl-2-oxo-2-[(tetrahydro-2-oxo-2H-pyran-3-yl)oxy]ethyl ester, polymer with  
2-methyltricyclo[3.3.1.1.3,7]dec-2-yl 2-methyl-2-propenoate (9CI) (CA  
INDEX NAME)

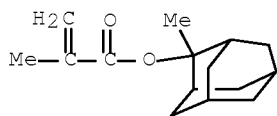
CM 1

CRN 297156-43-5  
CMF C13 H18 O6



CM 2

CRN 177080-67-0  
CMF C15 H22 O2



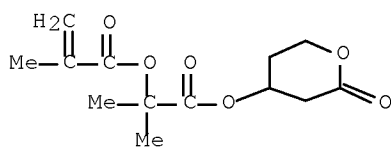
RN 297156-46-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethyl-2-oxo-2-[(tetrahydro-2-oxo-2H-pyran-4-yl)oxy]ethyl ester, polymer with 2-ethyltricyclo[3.3.1.1.3,7]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 297156-45-7

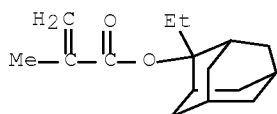
CMF C13 H18 O6



CM 2

CRN 209982-56-9

CMF C16 H24 O2



RN 297156-51-5 HCAPLUS

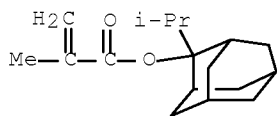
CN 2-Propenoic acid, 2-methyl-, 2-(1-methylethyl)tricyclo[3.3.1.1.3,7]dec-2-yl ester, polymer with 1,1-dimethyl-2-oxo-2-[(tetrahydro-2-oxo-2H-pyran-4-yl)oxy]ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 297156-50-4

CMF C17 H26 O2

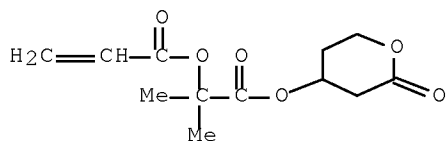
10/594,282



CM 2

CRN 297156-49-1

CMF C12 H16 O6



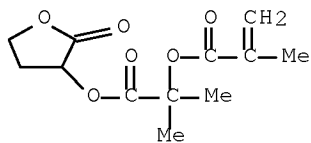
RN 297156-52-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethyl-2-oxo-2-[(tetrahydro-2-oxo-3-furanyl)oxy]ethyl ester, polymer with 2-ethyltricyclo[3.3.1.1.3,7]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 288303-54-8

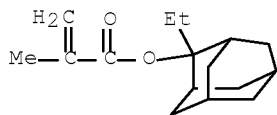
CMF C12 H16 O6



CM 2

CRN 209982-56-9

CMF C16 H24 O2



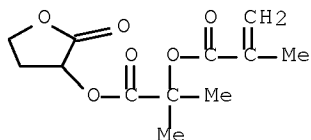
RN 297156-53-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with  
1,1-dimethyl-2-oxo-2-[(tetrahydro-2-oxo-3-furanyl)oxy]ethyl  
2-methyl-2-propenoate and 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 288303-54-8

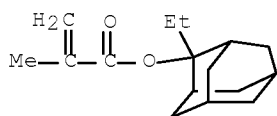
CMF C12 H16 O6



CM 2

CRN 209982-56-9

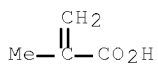
CMF C16 H24 O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



RN 297156-55-9 HCAPLUS

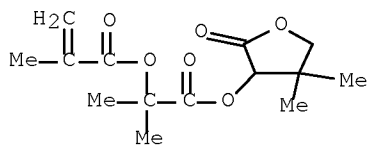
CN 2-Propenoic acid, 2-methyl-, polymer with  
1,1-dimethyl-2-oxo-2-[(tetrahydro-4,4-dimethyl-2-oxo-3-furanyl)oxy]ethyl 2-methyl-2-propenoate and  
2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-methyl-2-propenoate (9CI) (CA  
INDEX NAME)

CM 1



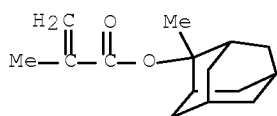
10/594,282

CRN 297156-54-8  
CMF C14 H20 O6



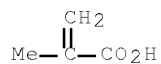
CM 2

CRN 177080-67-0  
CMF C15 H22 O2



CM 3

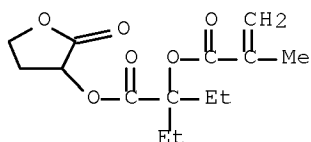
CRN 79-41-4  
CMF C4 H6 O2



RN 297156-57-1 HCAPLUS  
CN Butanoic acid, 2-ethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-, tetrahydro-2-oxo-3-furanyl ester, polymer with 2-ethyltricyclo[3.3.1.3,7]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

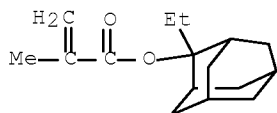
CRN 297156-56-0  
CMF C14 H20 O6



CM 2

CRN 209982-56-9

CMF C16 H24 O2



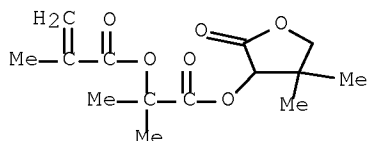
RN 297156-58-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethyl-2-oxo-2-[(tetrahydro-4,4-dimethyl-2-oxo-3-furanyl)oxy]ethyl ester, polymer with 2-ethyltricyclo[3.3.1.1.3,7]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 297156-54-8

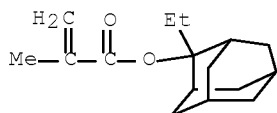
CMF C14 H20 O6



CM 2

CRN 209982-56-9

CMF C16 H24 O2



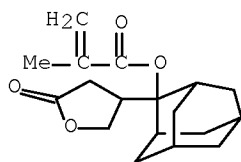
IT 297156-77-5P

(monomer; for far UV-sensitive photoresist

composition containing protected carboxy-substituted polymer)

RN 297156-77-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(tetrahydro-5-oxo-3-

furanyl)tricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester (CA INDEX NAME)

IC ICM G03F007-039  
ICS H01L021-027; C08F020-26

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 76

ST far UV photoresist carboxy protecting group

IT Photoresists  
(far UV-sensitive photoresist composition containing protected carboxy-substituted polymer)

IT Semiconductor device fabrication  
(far UV-sensitive photoresist composition containing protected carboxy-substituted polymer for)

IT 280566-60-1P 288303-55-9P 297156-25-3P 297156-30-0P 297156-33-3P  
297156-27-5P 297156-28-6P 297156-37-7P 297156-39-9P 297156-40-2P  
297156-35-5P 297156-42-4P 297156-44-6P 297156-46-8P  
297156-48-0P 297156-51-5P 297156-52-6P  
297156-53-7P 297156-55-9P 297156-57-1P  
297156-58-2P 297156-59-3P  
(far UV-sensitive photoresist composition containing protected carboxy-substituted polymer)

IT 67-63-0, Isopropyl alcohol, reactions 77-53-2, (+)-Cedrol  
108-93-0, Cyclohexanol, reactions 497-23-4,  $\gamma$ -Crotonolactone  
517-23-7,  $\alpha$ -Acetyl- $\gamma$ -butyrolactone 594-61-6,  
2-Hydroxyisobutyric acid 702-98-7, 2-Methyl-2-adamantanol  
5061-21-2,  $\alpha$ -Bromo- $\gamma$ -butyrolactone  
(for far UV-sensitive photoresist composition containing protected carboxy-substituted polymer)

IT 132603-00-0P 177080-67-0P, 2-Methyl-2-adamantyl methacrylate  
239784-43-1P 245056-48-8P 280566-59-8P 288303-54-8P  
297156-24-2P 297156-26-4P 297156-29-7P 297156-31-1P  
297156-34-4P 297156-36-6P 297156-38-8P 297156-60-6P  
297156-61-7P 297156-62-8P 297156-63-9P 297156-64-0P  
297156-65-1P 297156-66-2P 297156-67-3P 297156-68-4P  
297156-69-5P 297156-70-8P 297156-71-9P 297156-72-0P  
297156-73-1P 297156-74-2P 297156-75-3P 297156-76-4P  
297156-77-5P 297156-78-6P 297156-79-7P 297156-80-0P  
297156-81-1P 297156-82-2P  
(monomer; for far UV-sensitive photoresist composition containing protected carboxy-substituted polymer)

L50 ANSWER 31 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:542343 HCAPLUS Full-text

DOCUMENT NUMBER: 133:170234

TITLE: Alkali-soluble or acid-decomposable polysiloxane  
and positively working photoresist compositions  
containing it

INVENTOR(S): Mizutani, Kazuyoshi; Yasunami, Shoichiro  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 59 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000219743	A	20000808	JP 1999-24236	19990201
US 6296985	B1	20011002	US 2000-496259	20000201
PRIORITY APPLN. INFO.:			JP 1999-24236	A 19990201

ED Entered STN: 08 Aug 2000

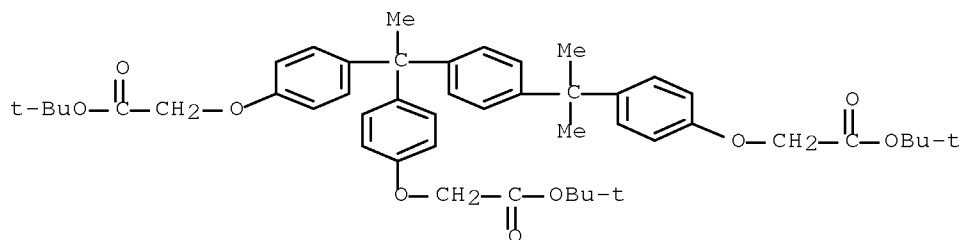
AB The alkali-soluble polysiloxane has a structure unit  $[\text{Si}[(\text{CH}_2)_n\text{LXZ}]\text{O}_3/2]$  [I;  $n = 1-6$ ; L = AOCO, ACO<sub>2</sub>, ANHCO, ANHCO<sub>2</sub>, ANHCONH, ACONH, ACONH, ACONHCO, AS; A = none, arylene; X = none, divalent linkage group; Z = C<sub>6</sub>H<sub>5</sub>-l(OH)l, CY<sub>3</sub>-m[C<sub>6</sub>H<sub>5</sub>-l(OH)l]m; Y = H, alkyl, aryl, aralkyl; l, m = 1-3], or  $[\text{Si}[(\text{CH}_2)_n\text{OCOXZ}]\text{O}_3/2]$  [II]. The acid-decomposable polysiloxane has (A) the structure unit I whose phenolic OH is (partially) protected with acid-decomposable group or (B) structure units II and  $[\text{Si}[(\text{CH}_2)_n\text{OCOXZ}']\text{O}_3/2]$  [III;  $n = 1-6$ ; Z' = C<sub>6</sub>H<sub>5</sub>-l(OR)l, CY<sub>3</sub>-m[C<sub>6</sub>H<sub>5</sub>-l(OR)l]m; R = acid-decomposable group]. The photoresist composition contains an acid-decomposable polysiloxane having the structure unit III and a photoacid generator. The photoresist composition contains (A) an alkali-soluble polysiloxane having structure unit II. (B) a photoacid generator, and (C) phenolic compds. (partially) protected with an acid-decomposable group or aromatic or aliphatic carboxylic acid (partially) protected with an acid-decomposable group. The composition shows high sensitivity and gives high-resolution resist images to be useful for manufacture of semiconductor IC.

IT 153698-54-5

(photoresist composition containing alkali-soluble or acid-decomposable polysiloxane)

RN 153698-54-5 HCAPLUS

CN Acetic acid, 2,2'-[[1-[4-[1-[4-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl]-1-methylethyl]phenyl]ethylidene]bis(4,1-phenyleneoxy)]bis-, 1,1'-bis(1,1-dimethylethyl) ester (CA INDEX NAME)



IC ICM C08G077-14

ICS C08K005-02; C08K005-3492; C08K005-36; C08K005-41; C08K005-42;  
 C08L083-06; G03F007-004; G03F007-039; G03F007-075; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38, 76

IT 153698-54-5 153698-63-6 199432-82-1 228101-60-8  
287925-56-8

(photoresist composition containing alkali-soluble or  
acid-decomposable polysiloxane)

L50 ANSWER 32 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:508167 HCAPLUS Full-text

DOCUMENT NUMBER: 133:142612

TITLE: Calixarenes for use as dissolution inhibitors in  
lithographic photoresist compositions

INVENTOR(S): Ito, Hiroshi; Nakayama, Tomonari; Ueda, Mitsuru

PATENT ASSIGNEE(S): International Business Machines Corp., USA

SOURCE: U.S., 18 pp.  
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 6093517	A	20000725	US 1998-127325	19980731
PRIORITY APPLN. INFO.:			US 1998-127325	19980731

OTHER SOURCE(S): MARPAT 133:142612

ED Entered STN: 27 Jul 2000

AB The invention relates generally to photolithog., particularly, to dissoln. inhibitors for use in a lithog. photoresist composition The lithog. photoresist composition contains novel calixarene compds., particularly calix[4]resorcinarenes that are partially or wholly protected with acid-labile groups, as dissoln. inhibitors. A process for using the composition to generate resist images on a substrate is described, i.e., in the manufacture of integrated circuits or the like.

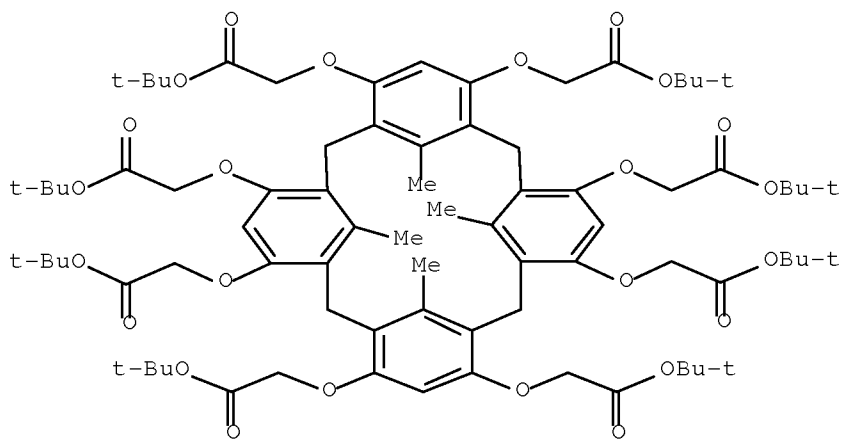
IT 286455-03-6P 286455-04-7P 286455-05-8P  
286455-06-9P 286455-07-0P 286455-08-1P  
286455-26-3P 286455-27-4P 286455-28-5P  
286455-29-6P 286455-30-9P 286455-31-0P

(preparation of, calixarenes for use as dissoln. inhibitors in  
lithog. photoresist compns.)

RN 286455-03-6 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2''''',2''''',2''''',2''''''-[[25,26,27,28-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosal(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl]octakis(oxy)]octakis-, octakis(1,1-dimethylethyl) ester, stereoisomer (9CI) (CA INDEX NAME)

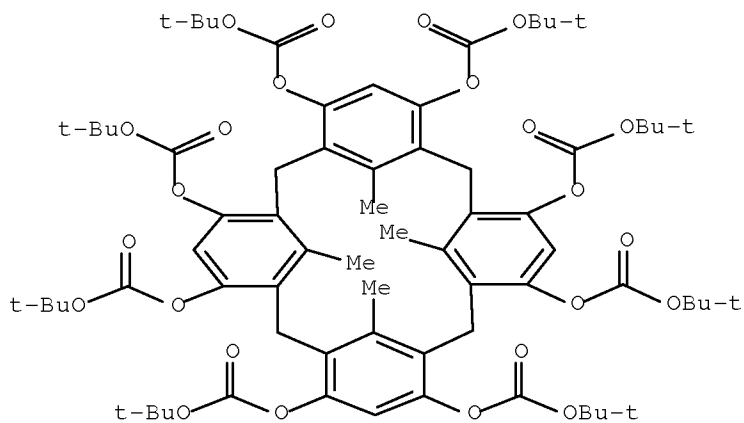
10/594,282



RN 286455-04-7 HCAPLUS

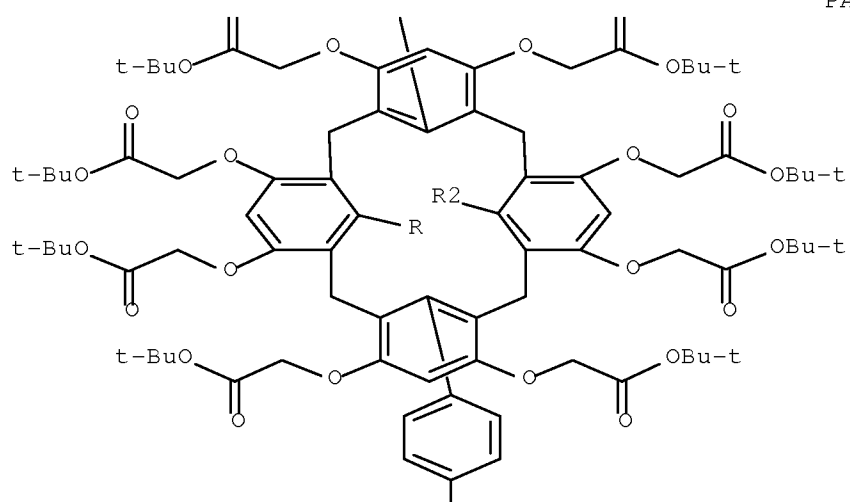
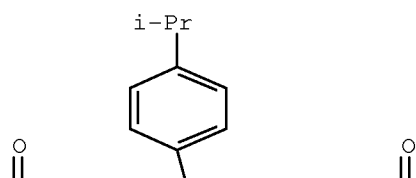
CN Carbonic acid, 25, 26, 27, 28-

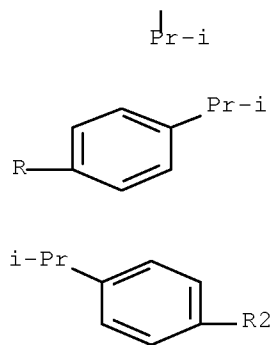
tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-  
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-  
4,6,10,12,16,18,22,24-octayl octakis(1,1-dimethylethyl) ester,  
stereoisomer (9CI) (CA INDEX NAME)



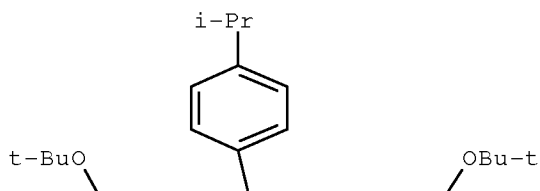
RN 286455-05-8 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2''''',2''''',2''''',2''''''-[[25,26,27,28-tetrakis[4-(1-methylethyl)phenyl]pentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl]octakis(oxy)]octakis-, octakis(1,1-dimethylethyl) ester, stereoisomer (9CI) (CA INDEX NAME)

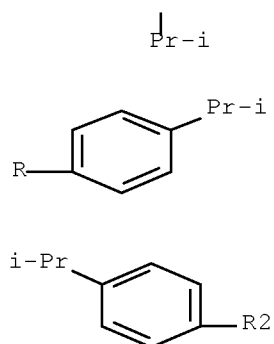
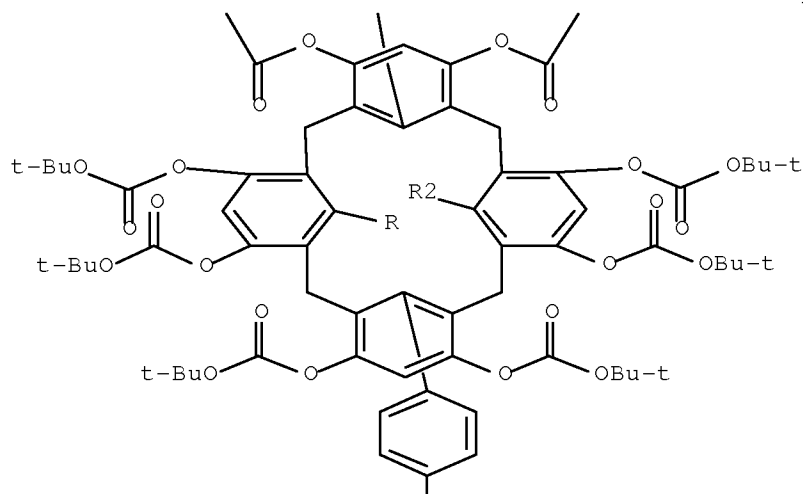




RN 286455-06-9 HCAPLUS  
 CN Carbonic acid, 25,26,27,28-tetrakis[4-(1-methylethyl)phenyl]pentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl octakis(1,1-dimethylethyl) ester, stereoisomer (9CI) (CA INDEX NAME)

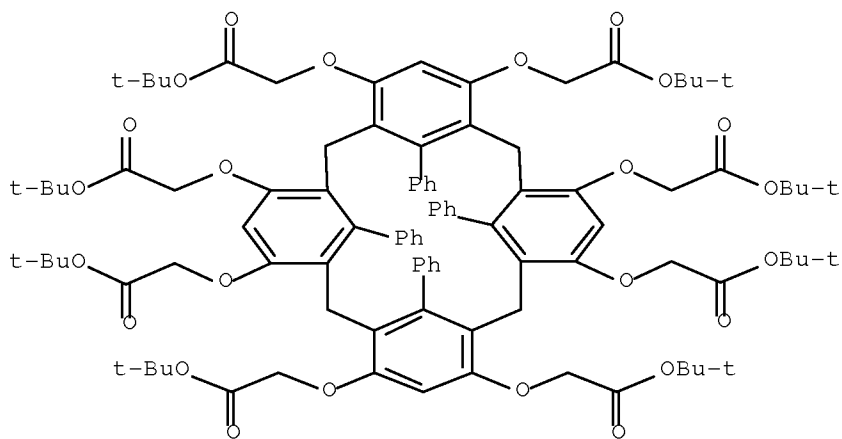






RN 286455-07-0 HCAPLUS  
 CN Acetic acid, 2,2',2'',2''',2''''',2''''',2''''',2''''',2''''''-[[25,26,27,28-tetraphenylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl]octakis(oxy)]octakis-, octakis(1,1-dimethylethyl) ester, stereoisomer (9CI) (CA INDEX NAME)

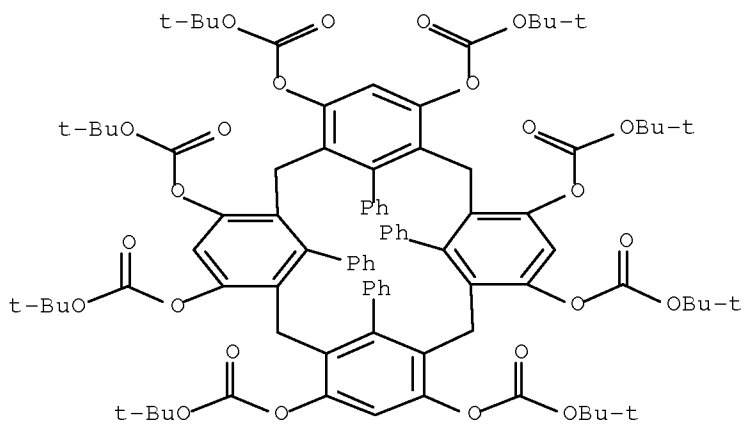
10/594,282



RN 286455-08-1 HCAPLUS

CN Carbonic acid, 25, 26, 27, 28-

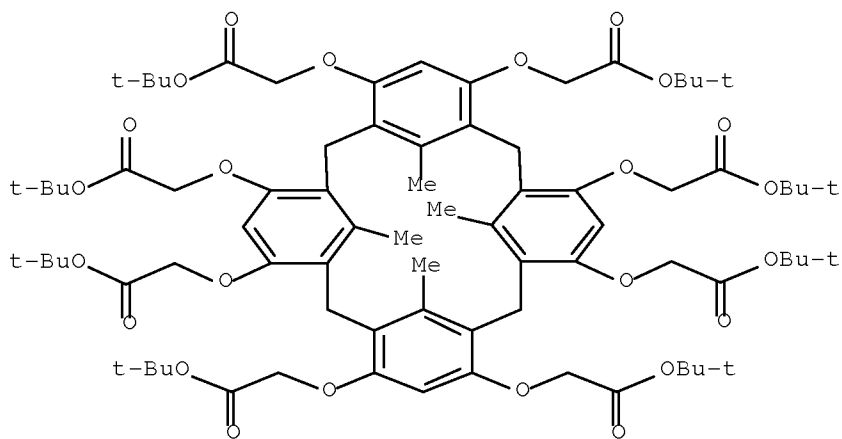
tetraphenylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-  
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-  
4,6,10,12,16,18,22,24-octayl octakis(1,1-dimethylethyl) ester,  
stereoisomer (9CI) (CA INDEX NAME)



RN 286455-26-3 HCAPLUS

CN	Acetic acid, 2,2',2'',2''',2''''',2''''',2''''',2''''''-[[25,26,27,28-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl]octakis(oxy)octakis-, octakis(1,1-dimethylethyl) ester, stereoisomer (9CI) (CA INDEX NAME)
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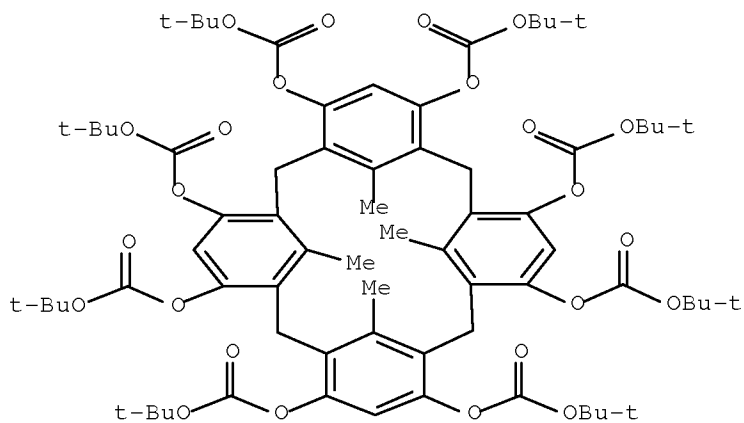
10/594,282



RN 286455-27-4 HCAPLUS

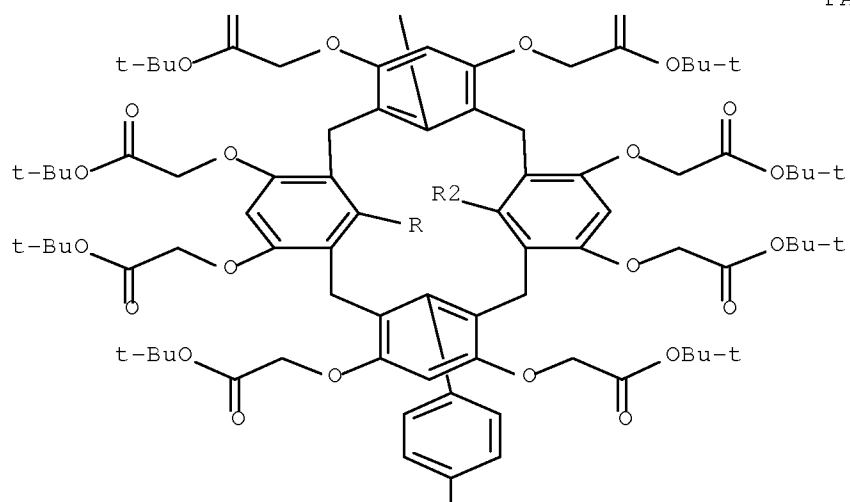
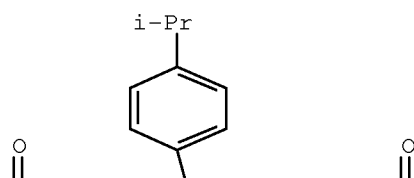
CN Carbonic acid, 25, 26, 27, 28-

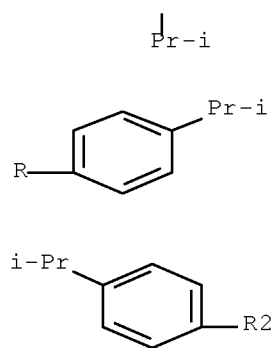
tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-  
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-  
4,6,10,12,16,18,22,24-octayl octakis(1,1-dimethylethyl) ester,  
stereoisomer (9CI) (CA INDEX NAME)



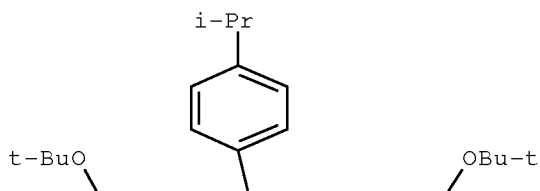
RN 286455-28-5 HCAPLUS

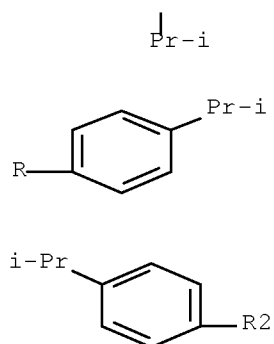
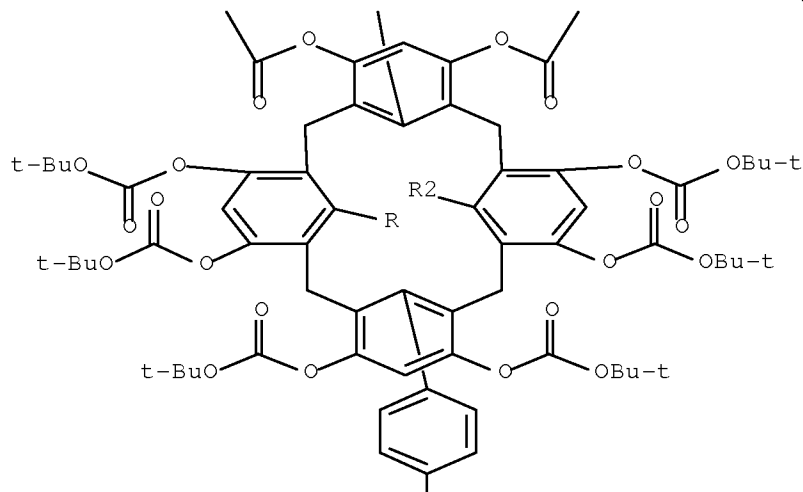
CN Acetic acid, 2,2',2'',2''',2''''',2''''',2''''',2''''''-[[25,26,27,28-tetrakis[4-(1-methylethyl)phenyl]pentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl]octakis(oxy)]octakis-,  
octakis(1,1-dimethylethyl) ester, stereoisomer (9CI) (CA INDEX NAME)



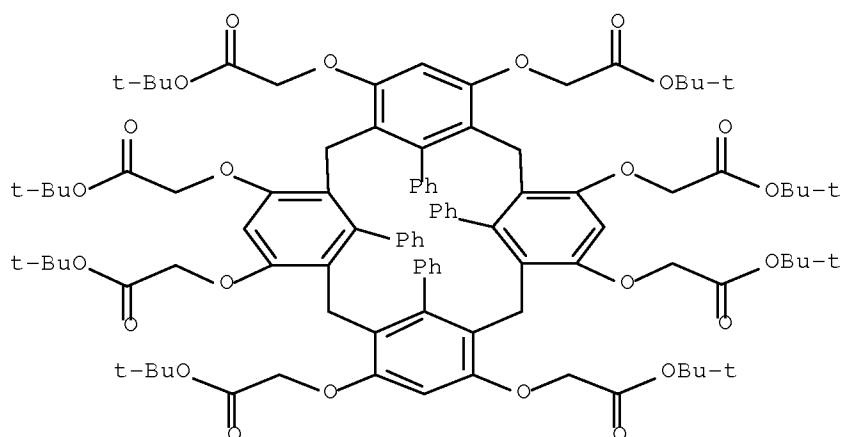


RN 286455-29-6 HCAPLUS  
 CN Carbonic acid, 25,26,27,28-tetrakis[4-(1-methylethyl)phenyl]pentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl octakis(1,1-dimethylethyl) ester, stereoisomer (9CI) (CA INDEX NAME)



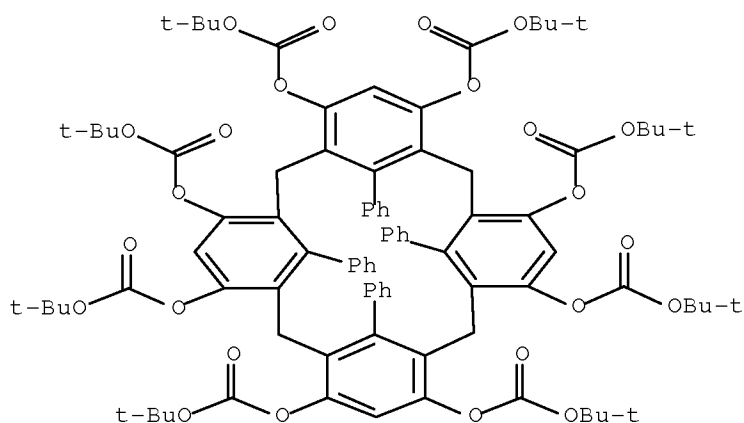


RN 286455-30-9 HCAPLUS  
 CN Acetic acid, 2,2',2'',2''',2''''',2''''',2''''',2''''',2''''''-[[25,26,27,28-tetraphenylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl]octakis(oxy)]octakis-, octakis(1,1-dimethylethyl) ester, stereoisomer (9CI) (CA INDEX NAME)



RN 286455-31-0 HCAPLUS

CN Carbonic acid, 25,26,27,28-tetraphenylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl octakis(1,1-dimethylethyl) ester, stereoisomer (9CI) (CA INDEX NAME)



IC ICM G03F007-039

ICS C07C041-00

INCL 430270100

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 25, 35

ST calixarene dissoln inhibitor lithog photoresist

IT Dissolution

Integrated circuits

Photolithography

Photoresists

(calixarenes for use as dissoln. inhibitors in lithog. photoresist compns.)

IT Dendritic polymers

## Metacyclophanes

(calixarenes for use as dissoln. inhibitors in lithog. photoresist compns.)

IT 65338-98-9

(dissoln. behavior of calixarenes for use as dissoln. inhibitors in lithog. photoresist compns.)

IT 274681-52-6P 286437-13-6P 286437-14-7P 286455-02-5P

286455-03-6P 286455-04-7P 286455-05-8P

286455-06-9P 286455-07-0P 286455-08-1P

286455-24-1P 286455-25-2P 286455-26-3P

286455-27-4P 286455-28-5P 286455-29-6P

286455-30-9P 286455-31-0P

(preparation of, calixarenes for use as dissoln. inhibitors in lithog. photoresist compns.)

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L50 ANSWER 33 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:752381 HCAPLUS Full-text

DOCUMENT NUMBER: 132:17147

TITLE: Positive-working photosensitive composition

INVENTOR(S): Kodama, Kunihiro

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 43 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 11327149	A	19991126	JP 1999-70372	19990316
JP 3949313	B2	20070725		
US 6060213	A	20000509	US 1999-270516	19990317
PRIORITY APPLN. INFO.:			JP 1998-66990	A 19980317

OTHER SOURCE(S): MARPAT 132:17147

ED Entered STN: 26 Nov 1999

GI For diagram(s), see printed CA Issue.

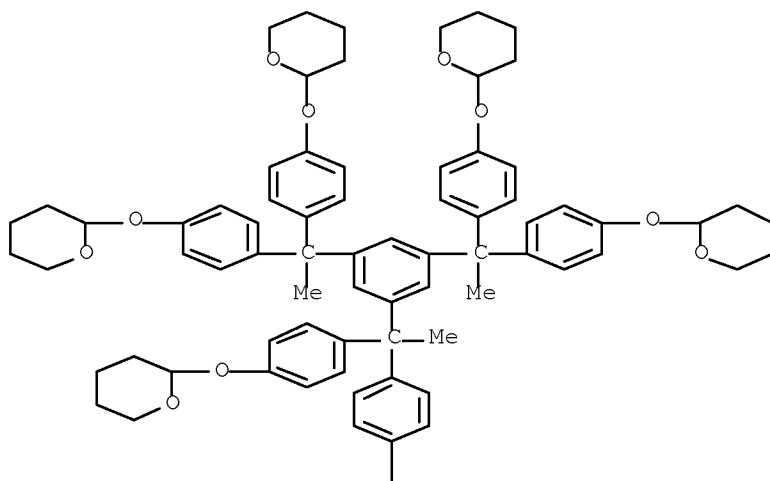
AB The title photosensitive composition contains (a) a polycyclic basic N-containing compound I (Y, Z = straight-chain, branched or cyclic alkylene which may contain heteroatoms and may be substituted), (b)  $\geq 1$  compound selected from II-IV [R1-37 = H, straight-chain, branched or cyclic alkyl, straight-chain, branched or cyclic alkoxy, OH, halo, SR38 (R38 = straight-chain, branched or cyclic alkyl, aryl); X- = benzenesulfonic acid, naphthalenesulfonic acid or anthracene sulfonic acid anion which has (i)  $\geq 1$  group selected from branched or cyclic C $\geq 8$  alkyl and alkoxy,  $\geq 2$  groups selected from straight-chain, branched or cyclic C4-7 alkyl and alkoxy, or  $\geq 3$  groups selected from straight-chain, branched or cyclic C1-3 alkyl and alkoxy or (ii)  $\geq 1$  group selected from ester, R39CO, R40CONH, R41NH, R42CONH, R43NHCO2, R44NHCONH, R45NHCSN, R46SO2NH, and NO2 groups (R39-46 = straight-chain, branched or cyclic alkyl, aryl)], which generates an acid upon activating radiation irradiation, and (c) a resin having groups which are decomposed by the action of acid to increase the solubility in alkali developing solns. The composition may contain (a), (b), (d) a low-mol.-weight dissoln.-inhibiting compound with mol. weight  $\leq 3000$  which has an acid-decomposable group and of which the solubility in alkali developing solns.



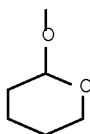
increases by the action of acid, and (e) a resin insol. in water and soluble in alkali developing solns. The composition shows high photosensitivity and provides a high resolution pattern with good profile independent of the elapse of time from exposure to bake.

IT 196709-88-3P  
 (dissoln. inhibitor; photoresist composition containing  
 nitrogen-containing basic compound, acid generator, and alkali-soluble  
 resin)  
 RN 196709-88-3 HCAPLUS  
 CN 2H-Pyran, 2,2',2'',2''',2''''',2''''''-[1,3,5-  
 benzenetriyltris[ethylidynebis(4,1-phenyleneoxy)]]hexakis[tetrahydro-  
 (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



IC ICM G03F007-039  
 ICS G03F007-004; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 IT 153698-63-6P 153698-69-2P 196709-88-3P  
 (dissoln. inhibitor; photoresist composition containing  
 nitrogen-containing basic compound, acid generator, and alkali-soluble  
 resin)

L50 ANSWER 34 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1999:394790 HCAPLUS Full-text

DOCUMENT NUMBER: 131:80784  
 TITLE: Positive-working photoresist composition  
 containing two kinds of photoacid generator  
 INVENTOR(S): Uenishi, Kazuya; Kodama, Kunihiro; Aogo, Toshiaki;  
 Sato, Kenichiro  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 57 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11167199	A	19990622	JP 1997-333145	19971203
PRIORITY APPLN. INFO.:			JP 1997-333145	19971203

OTHER SOURCE(S): MARPAT 131:80784

ED Entered STN: 28 Jun 1999

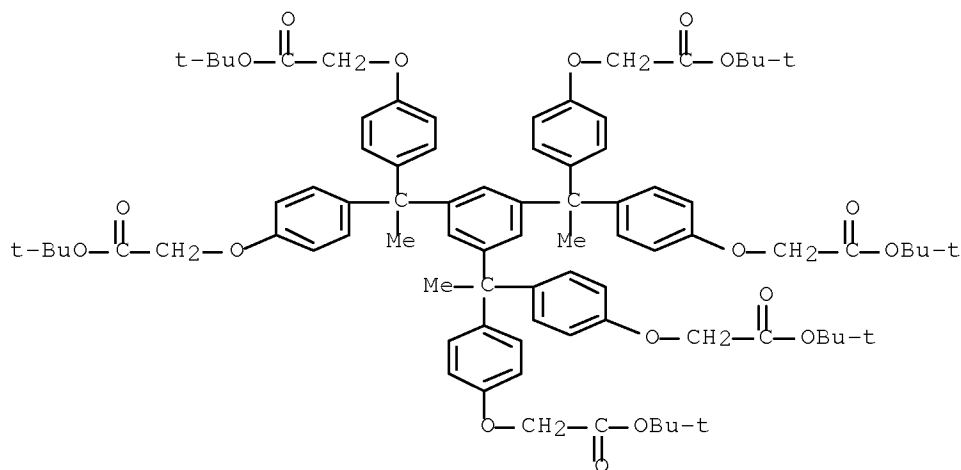
AB The title photoresist composition contains a resin having a group that is decomposed in the action of acid to increase the solubility in alkaline developing solns. and a mixture of 2 types of photoacid-generators which are higher and lower in the effect of slowing down the dissoln. rate of the exposed portion. The composition may contain the mixture of the 2 photoacid-generators, a dissoln. inhibitor with mol. weight  $\leq 3000$  which has an acid-decomposable group and of which the solubility in alkaline developing solns. is increased by the action of acid, and a water-insol. and alkali-soluble resin. The composition shows high photosensitivity and provides a high resolution pattern with good profile, and the properties are independent of the elapse of time from exposure to baking.

IT 153698-65-8P 202396-81-4P

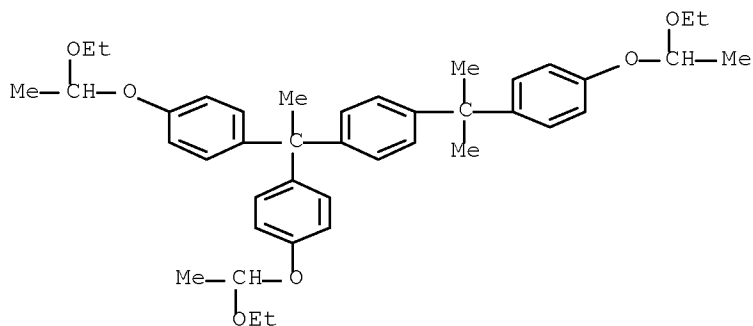
(dissoln. inhibitor; photoresist composition containing  
 alkali soluble resin and two kinds of photoacid generator)

RN 153698-65-8 HCAPLUS

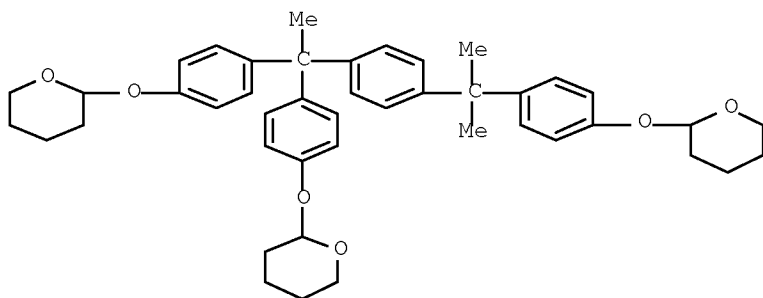
CN Acetic acid, 2,2',2'',2''',2''''',2''''''-[1,3,5-  
 benzenetriyltris[ethylidenebis(4,1-phenyleneoxy)]]hexakis-,  
 hexakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



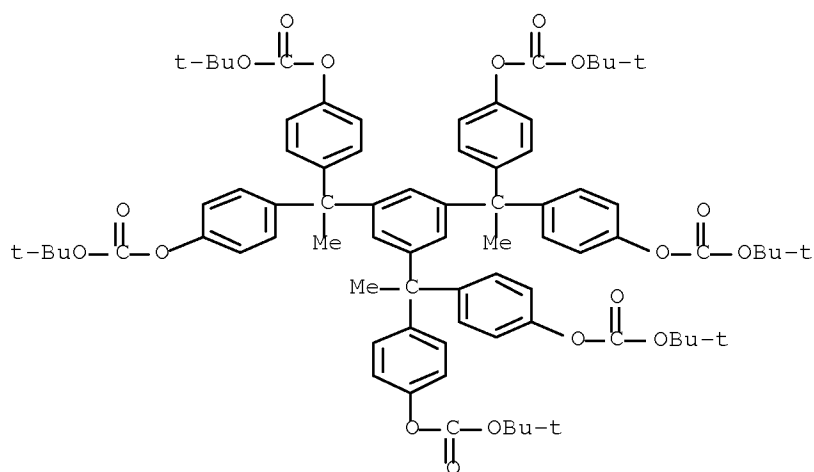
RN	202396-81-4	HCAPLUS
CN	Benzene, 1-[1-bis[4-(1-ethoxyethoxy)phenyl]ethyl]-4-[1-[4-(1-ethoxyethoxy)phenyl]-1-methylethyl]- (CA INDEX NAME)	



IT	153698-53-4 153698-64-7 228871-11-2 (dissoln. inhibitor; photoresist composition containing alkali soluble resin and two kinds of photoacid generator)
RN	153698-53-4 HCAPLUS
CN	2H-Pyran, 2,2'-[[1-[4-[1-methyl-1-[4-[(tetrahydro-2H-pyran-2-yl)oxy]phenyl]ethyl]phenyl]ethylidene]bis(4,1-phenyleneoxy)]bis[tetrahydro- (CA INDEX NAME)

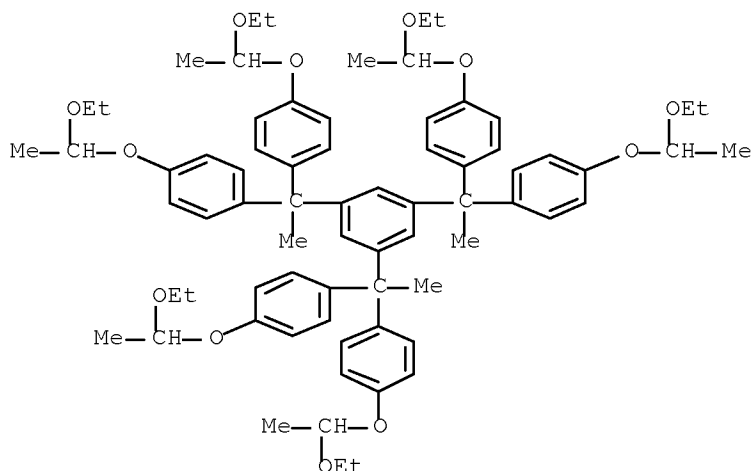


107



RN 228871-11-2 HCAPLUS

CN Benzene, 1,3,5-tris[1,1-bis[4-(1-ethoxyethoxy)phenyl]ethyl]- (CA INDEX NAME)



IC ICM G03F007-004

ICS G03F007-00; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 153698-65-8P 202396-81-4P

(dissoln. inhibitor; photoresist composition containing alkali soluble resin and two kinds of photoacid generator)

IT 24979-74-6, p-Hydroxystyrene-styrene copolymer 153698-53-4

153698-63-6 153698-64-7 228871-11-2

(dissoln. inhibitor; photoresist composition containing alkali soluble resin and two kinds of photoacid generator)

L50 ANSWER 35 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

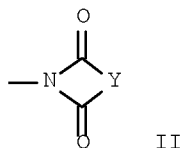
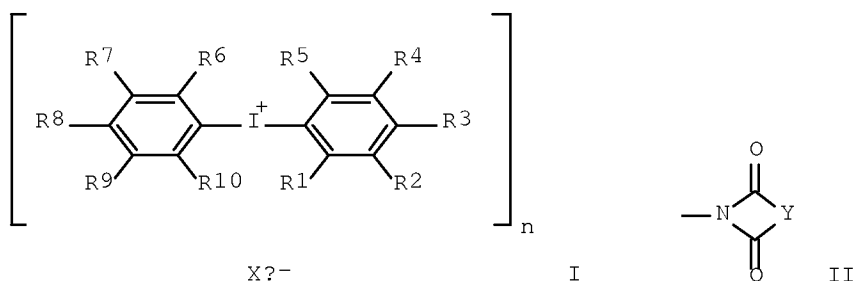
ACCESSION NUMBER: 1999:23393 HCAPLUS Full-text

DOCUMENT NUMBER: 130:102900

TITLE: Positive-working photosensitive composition  
 INVENTOR(S): Kodama, kunihiro; Aogo, Toshiaki; Yagihara, Morio  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 53 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11002895	A	19990106	JP 1997-156995	19970613
PRIORITY APPLN. INFO.:			JP 1997-156995	19970613

OTHER SOURCE(S): MARPAT 130:102900  
 ED Entered STN: 12 Jan 1999  
 GI

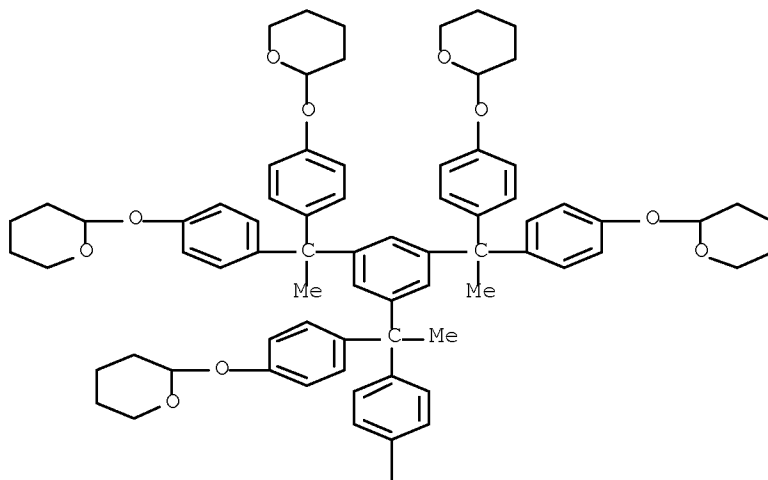


AB The title composition contains (a) an acid-generator I [R1-10 = H, halo, straight-chain, branched or cyclic alkyl or alkoxy, OH, NO<sub>2</sub>, sulfoamino, dialkylamino, ≥1 of R1-10 is NR'COR" or II; R' = H, alkyl, acyl, sulfonyl; R" = (substituted) alkyl, (substituted) aryl, R' and R" may link each other to form a ring; Y = straight-chain or branched alkylene, mono- or polycyclic alkylene which may contain hetero atoms, straight-chain or branched alkenylene, mono- or polycyclic alkenylene which may contain hetero atoms, arylene, aralkylene (these groups may be substituted), Y may link to other iodonium salt residue; Xn- = Cl-20 straight-chain, branched or cyclic alkylsulfonate ion with n valence which may be substituted, arylsulfonate ion which may be substituted by Cl-20 straight-chain, branched or cyclic alkyl or alkoxy, OH, NO<sub>2</sub>, halo, halo-substituted alkyl, alkoxy, carbonyl, acyl, acylamino or sulfonylamino, aralkylsulfonate ion which may be substituted by Cl-20 straight-chain, branched or cyclic alkyl or alkoxy, OH, NO<sub>2</sub>, halo, halo-substituted alkyl, alkoxy, carbonyl, acyl, acylamino or sulfonylamino, camphorsulfonate ion; n = 1-3] that generates a sulfonic acid upon active ray or radiation irradiation and (b) a resin having groups that are decomposed by the action of acid to increase the solubility in alkaline developing solns. The composition using far UV rays shows high photosensitivity and provides a high resolution resist pattern with good profile independent of the elapse of time until baking after exposure.

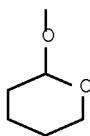
IT 196709-88-3P  
 (dissoln. inhibitor; pos.-working photoresist  
 composition containing sulfonic acid generator and alkali-soluble  
 resin)

RN 196709-88-3 HCAPLUS  
 CN 2H-Pyran, 2,2',2'',2''',2''''',2''''''-[1,3,5-benzenetriyltris[ethylidynebis(4,1-phenyleneoxy)]]hexakis[tetrahydro-(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



IC ICM G03F007-004  
 ICS G03F007-004; C08L025-18; G03F007-00; G03F007-039; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 IT 153698-63-6P 153698-69-2P 153840-05-2P 196709-88-3P  
 (dissoln. inhibitor; pos.-working photoresist  
 composition containing sulfonic acid generator and alkali-soluble resin)

L50 ANSWER 36 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:512684 HCAPLUS Full-text

DOCUMENT NUMBER: 129:223249

ORIGINAL REFERENCE NO.: 129:45255a,45258a

TITLE: Coated product using positive-working  
 photosensitive composition and patterning using  
 same

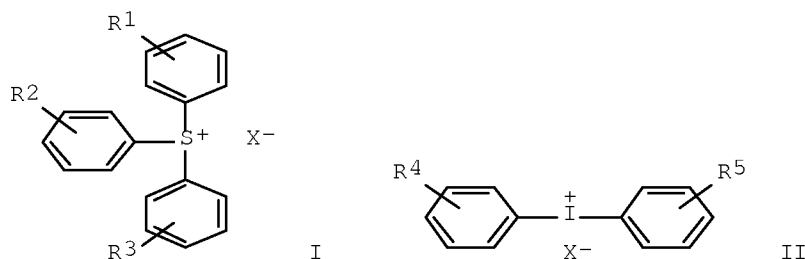
INVENTOR(S): Uenishi, Kazuya; Aogo, Toshiaki; Mizutani,  
 Kazuyoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 81 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE -----
JP 10213904	A	19980811	JP 1997-18916	19970131
PRIORITY APPLN. INFO.:			JP 1997-18916	19970131

OTHER SOURCE(S): MARPAT 129:223249  
 ED Entered STN: 18 Aug 1998  
 GI



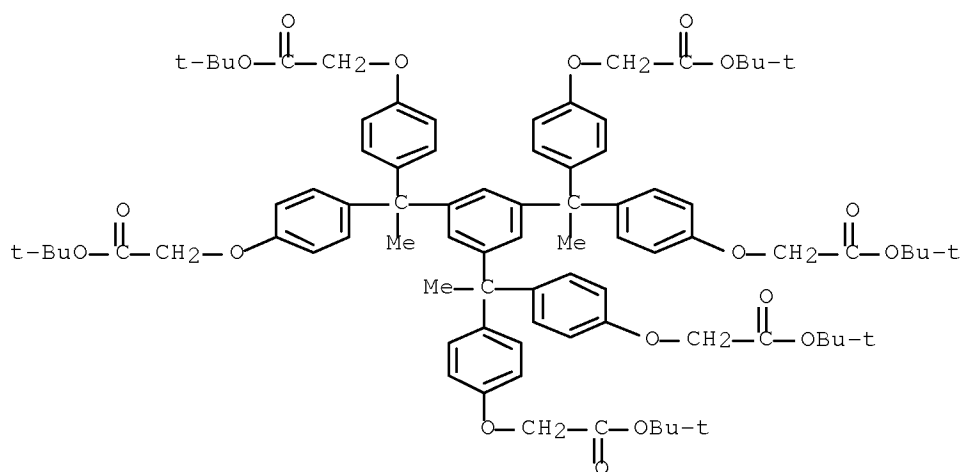
AB The coated product comprises a substrate coated with an antireflection layer and then with a pos.-working resist composition layer containing a compound generating a sulfonic acid upon active ray or irradiation I or II (R1-5 = H, alkyl, cycloalkyl, alkoxy, OH, halo, SR6 (R6 = alkyl or aryl); X- = anion of benzenesulfonic, naphthalenesulfonic or anthracenesulfonic acids having  $\geq 3$  Cl substituents or substituents in which the total C number is  $\geq 4$ ) and a resin that is decomposed by the action of acid to increase the solubility in alkaline developing solution. The product is patternwise exposed and developed to form a pattern. A high resolution resist pattern with good profile is obtained.

IT 153698-65-8P

(dissoln. inhibitor; photoresist composition containing sulfonic acid generating agent and alkali-soluble resin)

RN 153698-65-8 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2''''',2''''''-[1,3,5-benzenetriyltris[ethylidenebis(4,1-phenyleneoxy)]]hexakis-, hexakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



IC ICM G03F007-039  
 ICS C09D005-00; G03F007-004; G03F007-033; G03F007-11; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 38  
 IT 153698-58-9P 153698-65-8P 153698-68-1P 153698-69-2P  
 153698-70-5P 153840-05-2P 159293-87-5P  
 (dissoln. inhibitor; photoresist composition containing  
 sulfonic acid generating agent and alkali-soluble resin)

L50 ANSWER 37 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:414837 HCAPLUS Full-text  
 DOCUMENT NUMBER: 129:101934  
 ORIGINAL REFERENCE NO.: 129:20840h,20841a  
 TITLE: Radiation-sensitive resin composition  
 INVENTOR(S): Suwa, Mitsuhito; Iwasawa, Haruo; Kajita, Toru;  
 Iwanaga, Shin-ichiro  
 PATENT ASSIGNEE(S): Japan Synthetic Rubber Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 35 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 849634	A1	19980624	EP 1997-121963	19971212
EP 849634	B1	20040331		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 6187504	B1	20010213	US 1997-976662	19971124
JP 10232490	A	19980902	JP 1997-347330	19971203
JP 3632410	B2	20050323		
US 20010014427	A1	20010816	US 2000-739833	20001220
US 6322949	B2	20011127		
JP 2005043902	A	20050217	JP 2004-228885	20040805
JP 3849700	B2	20061122		
PRIORITY APPLN. INFO.:			JP 1996-353866	A 19961219



ED Entered STN: 08 Jul 1998

GI For diagram(s), see printed CA Issue.

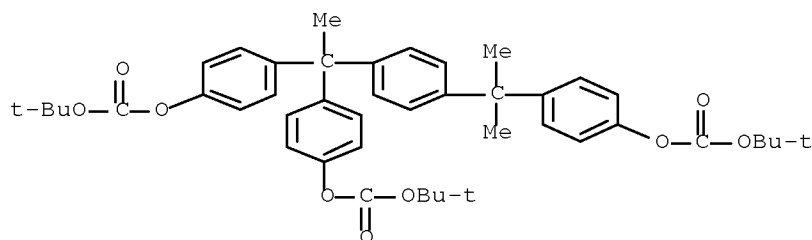
AB A pos.-tone or neg.-tone radiation-sensitive resin composition comprises (A) a photoacid generator represented by the formula I or II wherein R1, R2, R5, and R6 are an alkyl group; R3 and R7 are a hydroxyl group or -OR4 (wherein R4 is an organic group); A1- and A2- indicate a monovalent anion; a and c denote an integer of 4-7; and b and d denote an integer of 0-7. The pos.-tone radiation-sensitive resin composition further comprises (B1) an acid-cleavable group-containing resin or (B2) an alkali-soluble resin and an alkali solubility control agent and the neg.-tone radiation-sensitive resin composition further comprises (C) an alkali-soluble resin and (D) a crosslinking agent. The resin composition is highly sensitive and exhibits superior resolution and pattern forming performance.

IT 151533-21-0

(photoresist compns. containing aromatic photoacid generators and)

RN 151533-21-0 HCAPLUS

CN Carbonic acid, C,C'-[[1-[4-[1-[4-[[1,1-dimethylethoxy)carbonyl]oxy]phenyl]-1-methylethyl]phenyl]ethylidene]di-4,1-phenylene] C,C'-bis(1,1-dimethylethyl) ester (CA INDEX NAME)



IC ICM G03F007-004

ICS G03F007-038

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 24979-70-2, Poly(p-hydroxystyrene) 59269-51-1D,  
Poly(hydroxystyrene), tert-butoxycarbonylated 117458-06-7  
151533-21-0 195154-95-1 209482-08-6, 2-Hydroxypropyl  
acrylate-tetrahydropyranyl acrylate-tricyclodecanyl acrylate copolymer  
209482-09-7 209482-11-1 209545-11-9

(photoresist compns. containing aromatic photoacid generators and)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L50 ANSWER 38 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:335136 HCAPLUS Full-text

DOCUMENT NUMBER: 129:60586

ORIGINAL REFERENCE NO.: 129:12441a,12444a

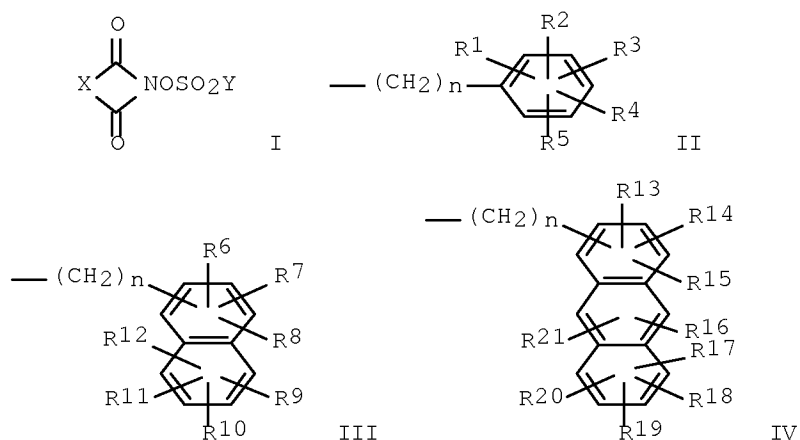
TITLE: Positive-working photosensitive composition

INVENTOR(S): Kodama, Kunihiro; Seigo, Toshiaki; Uenishi, Kazuya

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 54 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10133378	A	19980522	JP 1996-292715	19961105
PRIORITY APPLN. INFO.:			JP 1996-292715	19961105

ED Entered STN: 04 Jun 1998  
 GI

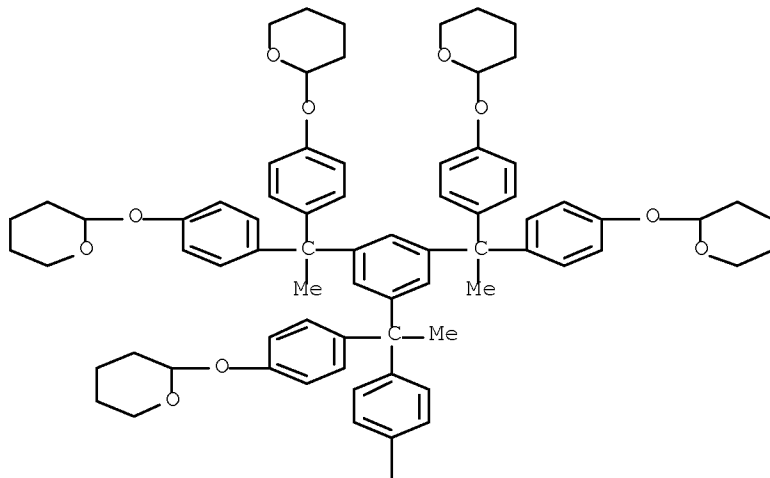


AB The title composition contains an imido sulfonate compound, that generates sulfonic acid upon active ray irradiation, I [Y = II, III, IV; n = 0-10; R1-21 = H, straight-chain, branched or cyclic alkyl, halo, perfluoroalkyl, alkoxy, acyl, acyloxy, formyl, nitro, acylamino, sulfonylamino, aryl, alkoxycarbonyl (these groups may link to other sulfonyloxyimido residue), ≥1 of R1-5, R6-12, and R13-21 is an alkoxy group and the sum of C nos. of each substituent of R1-5, R6-12, and R13-21 is ≥2; X = (substituted) alkylene which may contain hetero atoms, (substituted) monocyclic or polycyclic cycloalkylene, (substituted) arylene, (substituted) alkenylene (these groups may link to other sulfonyloxyimido residue)] and a resin having groups that are decomposed by the action of acid to increase the solubility in alkaline developing solns. The composition may contain the acid-generating agent I, a dissoln.-inhibiting compound with mol. weight ≤3000 which has acid-decomposable groups and of which the solubility in alkaline developing solns. is increased by the action of acid, and a resin insol. in water and soluble in alkaline developing solns. The composition shows high photosensitivity and provides high resolution resist patterns with good profile independent of the elapse of time from exposure to bake.

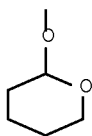
IT 196709-88-3P  
 (dissoln. inhibitor; photoresist composition containing imido sulfonate compound and alkali-soluble resin)

RN 196709-88-3 HCAPLUS  
 CN 2H-Pyran, 2,2',2'',2''',2''''',2''''''-[1,3,5-benzenetriyltris[ethylidynebis(4,1-phenyleneoxy)]]hexakis[tetrahydro-(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



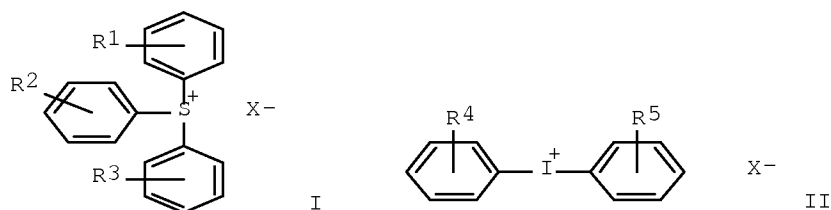
IC ICM G03F007-039  
 ICS G03F007-004; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 IT 153698-63-6P 153698-69-2P 196709-88-3P 208581-77-5P  
 (dissoln. inhibitor; photoresist composition containing imido sulfonate compound and alkali-soluble resin)

L50 ANSWER 39 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:298215 HCAPLUS Full-text  
 DOCUMENT NUMBER: 129:47398  
 ORIGINAL REFERENCE NO.: 129:9777a,9780a  
 TITLE: Positive-working photosensitive composition containing sulfonic acid generator  
 INVENTOR(S): Uenishi, Ichiya; Aogo, Toshiaki; Sato, kenichiro; Kodama, Kunihiko  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 65 pp.  
 CODEN: JKXXAF

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10123703	A	19980515	JP 1996-276565	19961018
PRIORITY APPLN. INFO.:			JP 1996-276565	19961018

OTHER SOURCE(S): MARPAT 129:47398  
 ED Entered STN: 21 May 1998  
 GI

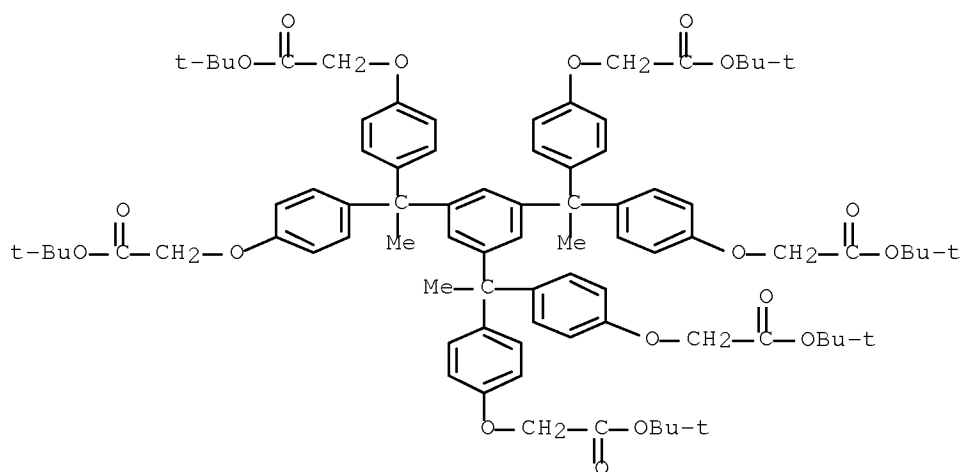


AB The title compns. contain (a) an organic basic compound, (b) a compound that generates sulfonic acid upon active ray or irradiation I or II [R1-5 = H, alkyl, cycloalkyl, alkoxy, OH, halo, SR6 (R6 = alkyl or aryl); X- = anion of benzenesulfonic, naphthalenesulfonic or anthracenesulfonic acid having  $\geq 1$  selected from branched or cyclic C $\geq 8$  alkyl and alkoxy groups,  $\geq 2$  selected from straight-chain, branched or cyclic C4-7 alkyl and alkoxy groups or  $\geq 3$  selected from straight-chain or branched C1-3 alkyl and alkoxy groups], (c) a resin having a group that is decomposed by the action of acid to increase the solubility in alkaline developing solns. and the molar ratio of b/a is 2.5-30.0. The compns. may contain (a) an organic basic compound, (b) an acid-decomposable group-containing dissoln. inhibitor with mol. weight  $\leq 3000$  of which the solubility in alkaline developing solns. is increased by the action of acid, (c) a resin insol. in water and soluble in aqueous alkaline solns, and (d) the acid-generating compound I or II, in which the molar ratio d/a is 2.5-30.0. The compns. show high photosensitivity and provide high resolution resist patterns with good profile independent of the elapse of time from exposure to bake.

IT 153698-65-8P  
 (dissoln. inhibitor; photoresist composition containing organic base, sulfonic acid-generating agent, and alkali-soluble resin)

RN 153698-65-8 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2''''',2''''''-[1,3,5-benzenetriyltris[ethylidenebis(4,1-phenyleneoxy)]]hexakis-, hexakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



IC ICM G03F007-004  
 ICS G03F007-004; G03F007-00; G03F007-039; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 IT 153698-58-9P 153698-65-8P 153698-68-1P 153698-69-2P  
 153698-70-5P 153840-05-2P 159293-87-5P 206869-62-7P  
 (dissoln. inhibitor; photoresist composition containing  
 organic base, sulfonic acid-generating agent, and alkali-soluble resin)

L50 ANSWER 40 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:231236 HCAPLUS Full-text  
 DOCUMENT NUMBER: 128:328771  
 ORIGINAL REFERENCE NO.: 128:65051a,65054a  
 TITLE: Positive-type photoresist compositions  
 INVENTOR(S): Uenishi, Kazuya; Sakaguchi, Shinji; Fujinomori,  
 Akira  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 58 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10097075	A	19980414	JP 1997-125686	19970515
TW 505827	B	20021011	TW 1997-86107682	19970604
PRIORITY APPLN. INFO.:			JP 1996-146180	A 19960607

ED Entered STN: 24 Apr 1998  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The title compns. comprise (A) CH<sub>2</sub>:C(R<sub>x</sub>)C<sub>6</sub>H<sub>4</sub>OH copolymer with  
 CH<sub>2</sub>:C(R<sub>x</sub>)C<sub>6</sub>H<sub>4</sub>OC(R<sub>a</sub>)(R<sub>b</sub>)OR<sub>c</sub> and/or the copolymers containing -

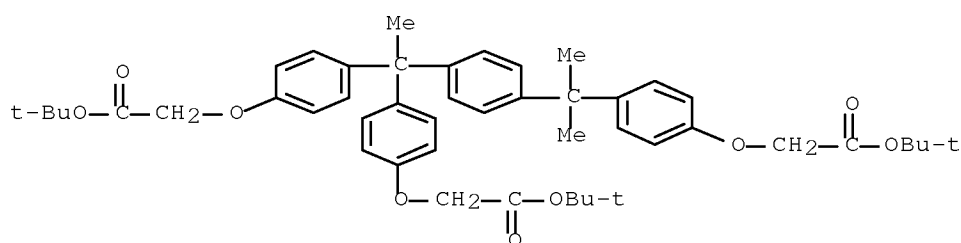
C(Rd)(Re)ORfOC(Rg)(Rh)- crosslinking groups, (B) compds. generating acids upon irradiation of active light or radiation, and (C) I or II, wherein Rx = H, Me; Ra, Rb, Rd, Re, Rg, Rh = H, C1-8 alkyl, C3-6 cycloalkyl; Rc = C1-8 alkyl, C3-6 cycloalkyl, Q1; Rf = C1-6 alkylene, C3-6 cycloalkylene, Q2; Ri, Rj = H, C1-6 alkyl, C3-6 cycloalkylene; l + m = 100; m/(l + m) = 0.05-0.90; A = H, OH; E, G = Q3; R1-4 = H, XR13, halogen; R5, R6 = H, Me, Et, C1-2 haloalkyl; a-f, k-n = 0-3; g-j = 0-2; p = 1-3; D = direct bond, CO, S, SO2, CR5R6, -C(R5)(R6)C6H4C(R5)(R6)-; R8-12 = H, OH, CN, CO2H, XR13; R13 = C1-8 alkyl; X = direct bond, O, S, CO, O2C.

IT 153698-54-5P 153698-65-8P

(pos.-type photoresist compns.)

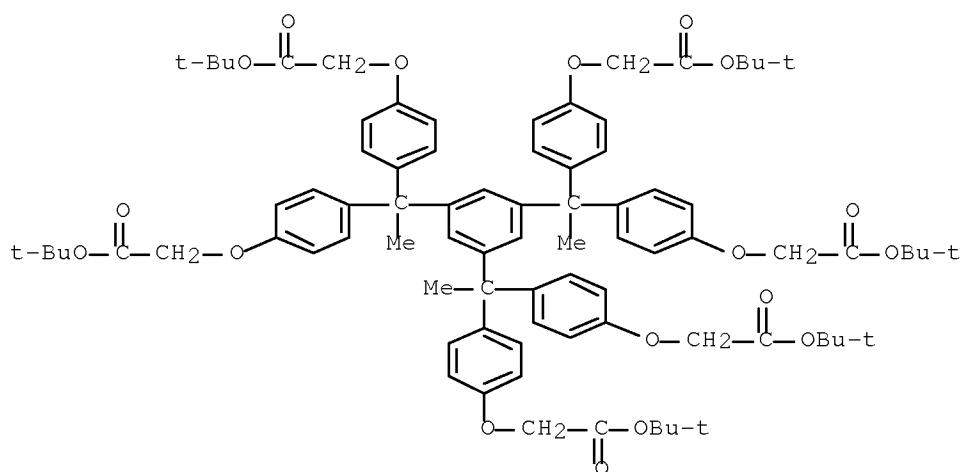
RN 153698-54-5 HCAPLUS

CN Acetic acid, 2,2'-[[1-[4-[1-[4-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl]-1-methylethyl]phenyl]ethylidene]bis(4,1-phenyleneoxy)]bis-, 1,1'-bis(1,1-dimethylethyl) ester (CA INDEX NAME)



RN 153698-65-8 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2'''',2'''--[1,3,5-benzenetriyltris[ethylidenebis(4,1-phenyleneoxy)]]hexakis-, hexakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



IC ICM G03F007-039

ICS G03F007-004; H01L021-027; H05K003-06; C08F012-22; C08L025-18

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

IT 153698-54-5P 153698-63-6P 153698-65-8P  
 189103-11-5P 189103-13-7P 189103-14-8P 189103-15-9P  
 206861-55-4P  
 (pos.-type photoresist compns.)

L50 ANSWER 41 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:719619 HCAPLUS Full-text  
 DOCUMENT NUMBER: 128:28625  
 ORIGINAL REFERENCE NO.: 128:5501a,5504a  
 TITLE: Positive-working photosensitive composition  
 INVENTOR(S): Aoai, Toshiaki; Yamanaka, Tsukasa; Uenishi, Kazuya  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: U.S., 34 pp., Cont.-in-part of U.S. Ser. No.  
 525,157, abandoned.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 5683856	A	19971104	US 1996-634529	19960418
JP 08123030	A	19960517	JP 1994-252351	19941018
JP 3317597	B2	20020826		
PRIORITY APPLN. INFO.:			JP 1994-252351	A 19941018
			US 1995-525157	B2 19950908

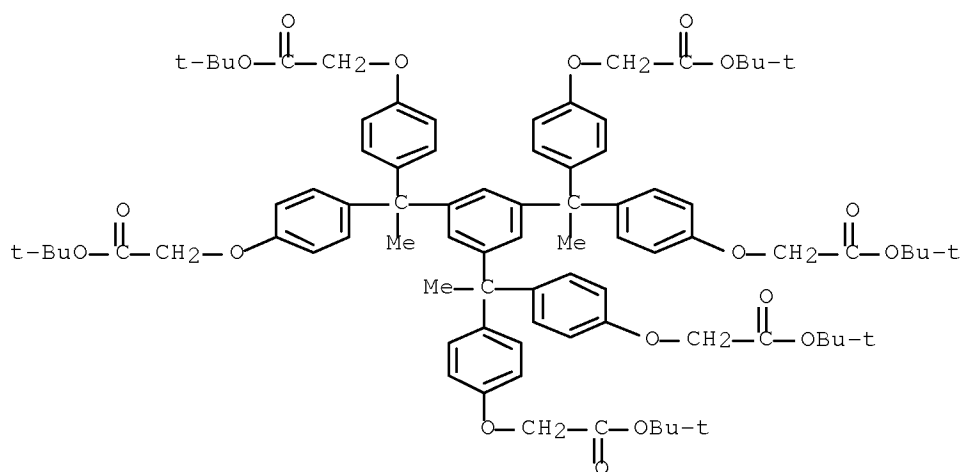
ED Entered STN: 14 Nov 1997

AB A pos.-working photosensitive composition is disclosed, which comprises: (a) a resin which is insol. in water but soluble in an alkaline aqueous solution; (b) a compound which generates an acid upon irradiation with an active light or radiation; (c) a low-mol.-weight acid-decomposable dissoln.-inhibitive compound having a mol. weight of 3000 or less and containing a group decomposable with an acid, and which increases its solubility in an alkaline developer by the action of an acid; and (d) a resin containing a basic nitrogen atom and having a weight-average mol. weight of 2000 or more. Another pos.-working photosensitive composition is disclosed, which comprises: (1) a compound which generates an acid upon irradiation with active light or radiation; (2) a resin having a group which undergoes decomposition by an acid whereby increasing its solubility in an alkaline developer; and (3) a resin containing a basic nitrogen atom and having a weight-average mol. weight of 2000 or more. The pos.-working photosensitive composition of the present invention can easily and properly inhibit acid diffusion and acid deactivation on the surface thereof with time between the exposure and the heat treatment, keep the dissoln.-inhibiting effect exerted by the dissoln.-inhibitive compound and exhibit a good profile, a high sensitivity, and a high resolving power.

IT 153698-65-8P  
 (preparation and use in pos.-working photoresist  
 compns. for lithog. plate and integrated circuit  
 manufacture)

RN 153698-65-8 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2''''-[1,3,5-  
 benzenetriyltris[ethylidenebis(4,1-phenyleneoxy)]]hexakis-,  
 hexakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



- IC ICM G03C001-492  
 INCL 430270100  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 IT Integrated circuits  
     Lithographic plates  
         (pos. photoimaging materials containing basic resins and acid-decomposable dissoln.-inhibitive compds. for manufacture of)  
 IT 177786-95-7P 177799-92-7P 199442-71-2P  
     (pos.-working photoresist compns. for lithog. plate and integrated circuit manufacture containing)  
 IT 24979-74-6, p-Hydroxystyrene-styrene copolymer 32335-20-9  
 66003-76-7 66003-78-9 124737-97-9 124738-06-3 129674-22-2,  
 tert-Butoxycarbonyloxystyrene-p-hydroxystyrene copolymer  
 133685-94-6, o-Hydroxystyrene-p-hydroxystyrene copolymer  
 138089-25-5, 2,2-Bis(tert-butoxycarbonyloxyphenyl)propane  
 142096-70-6 142952-62-3, tert-Butoxycarbonylmethyloxystyrene-p-hydroxystyrene copolymer 149642-75-1 153698-46-5 153698-67-0  
 171429-59-7, p-Acetoxystyrene-p-hydroxystyrene copolymer 176109-33-4  
 177786-96-8 177786-97-9 177786-98-0 177787-00-7 177787-02-9  
 177787-03-0 177799-93-8 177799-95-0  
     (pos.-working photoresist compns. for lithog. plate and integrated circuit manufacture containing)  
 IT 10445-91-7DP, reaction products with poly(p-hydroxystyrene)  
 24979-70-2DP, Poly(p-hydroxystyrene), reaction products with 4-chloromethylpyridine 27029-76-1P, m-Cresol-p-cresol-formaldehyde copolymer 112504-03-7P 114651-28-4P 153698-58-9P  
 153698-65-8P 153698-68-1P 153698-69-2P 153698-70-5P  
 153840-05-2P 159293-87-5P  
     (preparation and use in pos.-working photoresist compns. for lithog. plate and integrated circuit manufacture)  
 IT 153233-60-4  
     (preparation and use in pos.-working photoresist compns. for lithog. plate and integrated circuit manufacture)

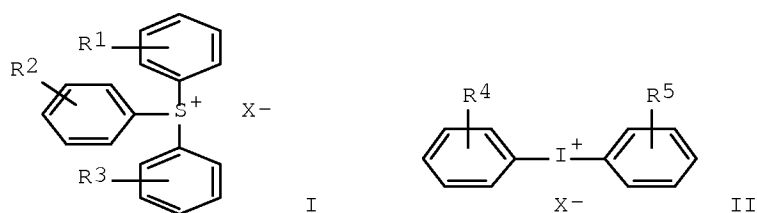
L50 ANSWER 42 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1997:648762 HCAPLUS Full-text  
 DOCUMENT NUMBER: 127:364166  
 ORIGINAL REFERENCE NO.: 127:71158h, 71159a



TITLE: Positive-working photosensitive composition  
 containing sulfonic acid generating compound  
 INVENTOR(S): Aoai, Toshiaki; Kodama, Kunihiro; Sato, Kenichiro;  
 Uenishi, Kazuya; Yamanaka, Tsukasa  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 59 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

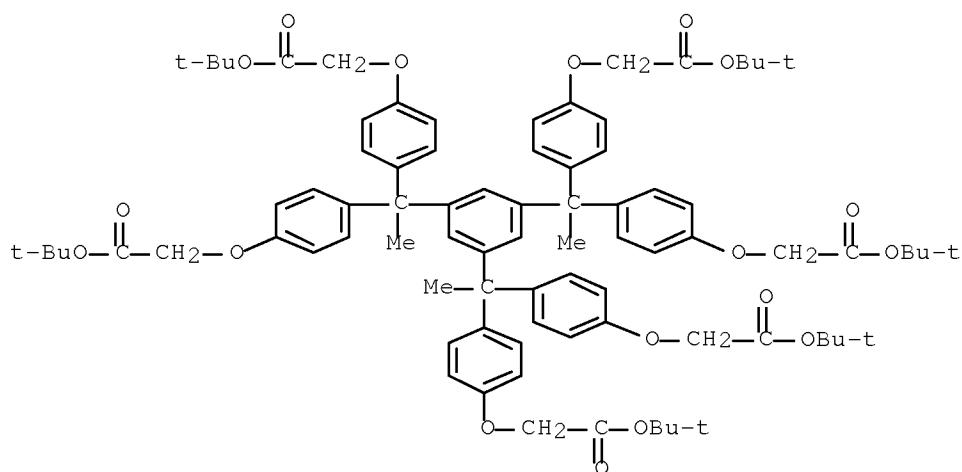
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09258435	A	19971003	JP 1996-66664	19960322
PRIORITY APPLN. INFO.:			JP 1996-66664	19960322

ED Entered STN: 11 Oct 1997  
 GI

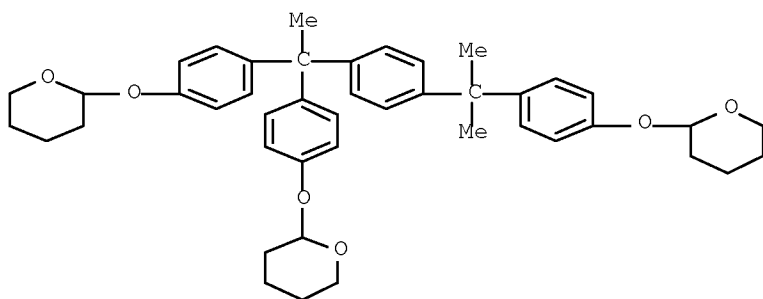


AB The title composition contains a resin having groups which are decomposed by the action of acids to increase the solubility in alkaline developing solns. and a compound I or II [R<sup>1</sup>-5 = H, alkyl, cycloalkyl, alkoxy, OH, halo, SR<sup>6</sup> (R<sup>6</sup> = alkyl or aryl); X<sup>-</sup> = benzenesulfonic acid, naphthalenesulfonic acid, or anthracenesulfonic acid anion having ≥1 group selected from R<sup>7</sup>CO, R<sup>8</sup>CONH, R<sup>9</sup>NHCO, R<sup>10</sup>CONH, R<sup>11</sup>NHCO<sub>2</sub>, R<sup>12</sup>NHCONH, R<sup>13</sup>NHCSNH, R<sup>14</sup>SO<sub>2</sub>NH, nitro, (R<sup>7</sup> = H, alkyl, cycloalkyl, aralkyl, aryl; R<sup>8</sup>-14 = alkyl, cycloalkyl, aralkyl, aryl)] which generates sulfonic acid upon irradiation The composition may comprise the sulfonic acid-generating compound, an acid-decomposable dissoln. inhibitor with mol. weight ≤3000 which has acid-decomposable groups and of which the solubility in alkaline developing solns. increases by the action of acids, and a resin insol. in water and soluble in aqueous alkali solns. The composition shows high photosensitivity and provides high quality resist patterns with good profile independent of the elapse of time after exposure.

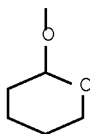
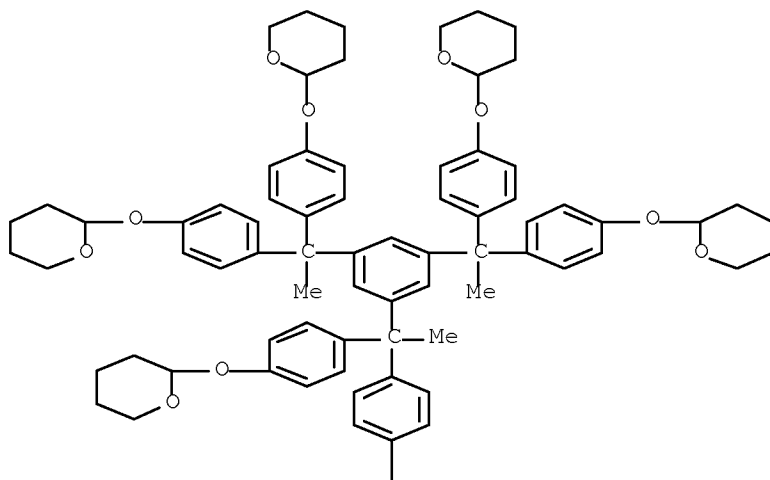
IT 153698-65-8P  
 (dissoln. inhibitor; pos.-working photoresist  
 composition containing sulfonic acid generating compound)  
 RN 153698-65-8 HCAPLUS  
 CN Acetic acid, 2,2',2'',2''',2''''',2''''''-[1,3,5-  
 benzenetriyltris[ethylidenebis(4,1-phenyleneoxy)]]hexakis-,  
 hexakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



IT 153698-53-4 196709-88-3  
 (dissoln. inhibitor; pos.-working photoresist  
 composition containing sulfonic acid generating compound)  
 RN 153698-53-4 HCAPLUS  
 CN 2H-Pyran, 2,2'-[[1-[4-[1-methyl-1-[4-[(tetrahydro-2H-pyran-2-yl)oxy]phenyl]ethyl]phenyl]ethylidene]bis(4,1-phenyleneoxy)]bis[tetrahydro- (CA INDEX NAME)]



RN 196709-88-3 HCAPLUS  
 CN 2H-Pyran, 2,2',2'',2''',2''',2''''-[1,3,5-benzenetriyltris[ethylidynebis(4,1-phenyleneoxy)]]hexakis[tetrahydro- (9CI) (CA INDEX NAME)]



IC ICM G03F007-004  
 ICS G03F007-004; C09K003-00; G03F007-039; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 37  
 IT 153698-58-9P 153698-65-8P 153698-68-1P 153698-69-2P  
 153698-70-5P 153840-05-2P 159293-87-5P  
 (dissoln. inhibitor; pos.-working photoresist  
 composition containing sulfonic acid generating compound)  
 IT 153698-53-4 161715-09-9 194535-96-1 194535-97-2  
 194535-98-3 196709-88-3 196709-96-3  
 (dissoln. inhibitor; pos.-working photoresist  
 composition containing sulfonic acid generating compound)

L50 ANSWER 43 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1997:610020 HCAPLUS Full-text  
 DOCUMENT NUMBER: 127:285943  
 ORIGINAL REFERENCE NO.: 127:55699a,55702a  
 TITLE: Positive-working photoresist composition using  
 specific alkali-soluble resin  
 INVENTOR(S): Tan, Shiro; Aoso, Toshiaki; Yamanaka, Hitoshi  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 47 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent

LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09236920	A	19970909	JP 1996-41689	19960228
PRIORITY APPLN. INFO.:			JP 1996-41689	19960228

ED Entered STN: 24 Sep 1997

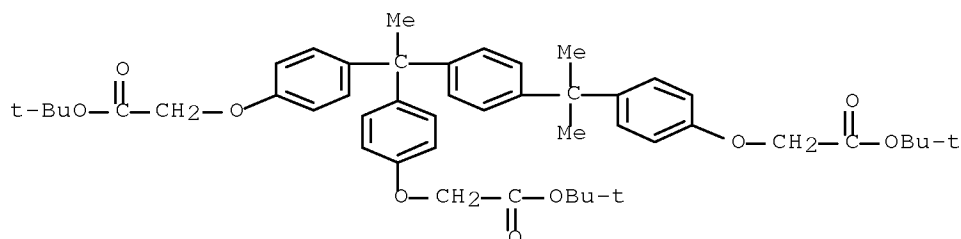
AB The title composition contains (a) a resin with weight average mol. weight (Mw) 4000-80,000 and mol. weight distribution Mw/Mn = 1.6-4.0 (Mn = number average mol. weight) which has  $\geq 1$  acid-decomposable group selected from acetal and silyl ether groups and of which the solubility in alkaline developing solns. increases by the action of acids, (b) a compound generating an acid upon irradiation, (c) a solvent, and (d) an optional non-polymer-type dissoln. inhibitor which has  $\geq 1$  selected from tert-alkyl ester and tert-alkyl carbonate groups and of which the solubility in alkaline aqueous solns. increases by the action of acids. The composition shows high sensitivity and storage stability, and provides high resolution patterns with good profile and the sensitivity and the profile. Thus, p-hydroxystyrene-styrene copolymer of which 20% of the OH groups were tert-butoxy-1-ethylated, p-Me<sub>2</sub>CC<sub>6</sub>H<sub>4</sub>(SO<sub>2</sub>)<sub>2</sub>Ph, and an organic basic compound were dissolved in propylene glycol monoethyl ether acetate to give a resist solution

IT 153698-54-5P

(dissoln. inhibitor; photoresist composition containing alkali soluble polymer with acetal or silyl ether group)

RN 153698-54-5 HCAPLUS

CN Acetic acid, 2,2'-[[1-[4-[1-[4-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl]-1-methylethyl]phenyl]ethylidene]bis(4,1-phenyleneoxy)]bis-, 1,1'-bis(1,1-dimethylethyl) ester (CA INDEX NAME)



IC ICM G03F007-039

ICS G03F007-004; G03F007-075; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 37

IT 153698-54-5P 153698-63-6P

(dissoln. inhibitor; photoresist composition containing alkali soluble polymer with acetal or silyl ether group)

L50 ANSWER 44 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:557773 HCAPLUS Full-text

DOCUMENT NUMBER: 127:255331

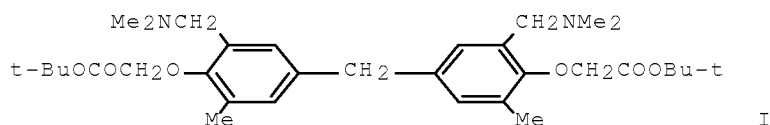
ORIGINAL REFERENCE NO.: 127:49761a

TITLE: Positive-working photosensitive composition

INVENTOR(S): providing good profile pattern  
 Fujimori, Toru; Aoso, Toshiaki; Yamanaka, Hitoshi;  
 Uenishi, Kazuya  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 63 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 09211865	A	19970815	JP 1996-19002	19960205
PRIORITY APPLN. INFO.:			JP 1996-19002	19960205

ED Entered STN: 01 Sep 1997  
 GI



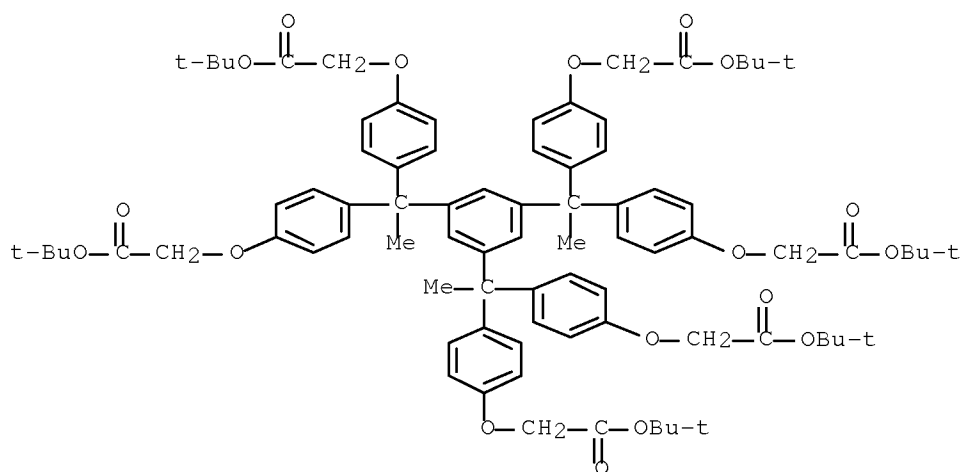
AB The title composition contains a resin insol. in water and soluble in alkaline aqueous solns., a compound generating an acid upon irradiation, and an acid-decomposable dissoln.-inhibiting compound with mol. weight  $\leq 3000$  which has basic N and acid-decomposable groups and of which the solubility in alkaline developing solns. is increased by the action of acid. The composition may also contain an acid-decomposable dissoln.inhibitor without N. The diffusion of the acid and the inactivation of the acid on the surface of the resist during the period from exposure to heat treatment are prevented and the dissoln.-inhibiting effect is improved, and hence high resolution patterns with high sensitivity and good profile are obtained. Thus, a resist comprised m-cresol-p-cresol-HCHO novolak resin, Ph3S+.CF3SO3-, 2,2-bis(tert-butoxycarbonyloxyphenyl)propane, and I.

IT 153698-65-8F

(pos.-working photoresist composition containing  
 acid-decomposable dissoln.-inhibitor)

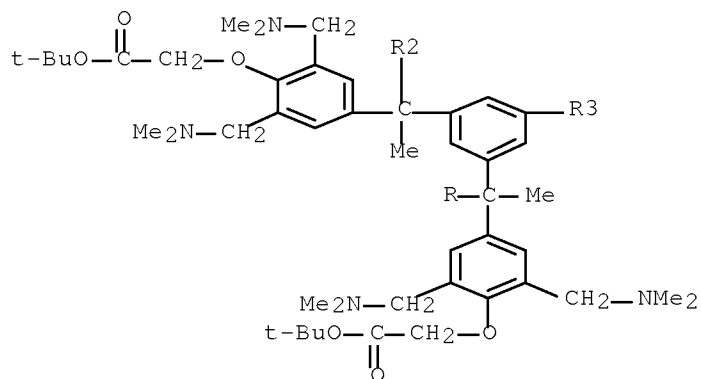
RN 153698-65-8 HCAPLUS

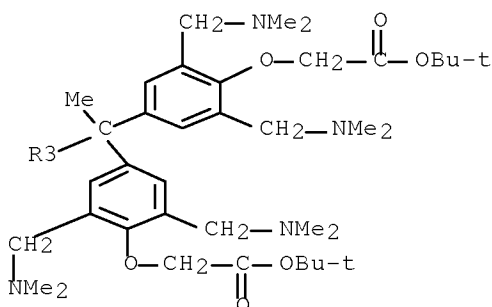
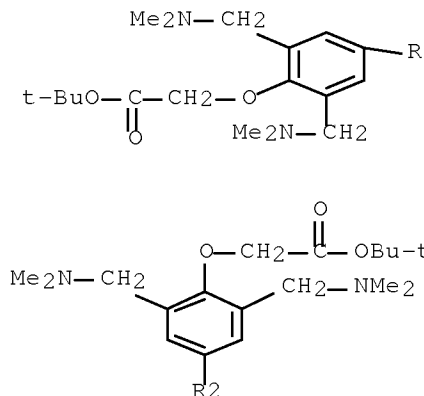
CN Acetic acid, 2,2',2'',2''',2''''-[1,3,5-benzenetriyltris[ethylidenebis(4,1-phenyleneoxy)]]hexakis-, hexakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



IT 195706-74-2  
 (pos.-working photoresist composition containing acid-decomposable  
 dissoln.-inhibitor)  
 RN 195706-74-2 HCAPLUS  
 CN Acetic acid, 2,2',2'',2''',2''',2''''-[1,3,5-  
 benzenetriyltris[ethylidynebis[2,6-bis[(dimethylamino)methyl]-4,1-  
 phenylene]oxy]]hexakis-, hexakis(1,1-dimethylethyl) ester (9CI) (CA  
 INDEX NAME)

PAGE 1-A





- IC ICM G03F007-039  
ICS G03F007-004; H01L021-027
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- IT 153698-58-9P 153698-65-8P 153698-68-1P 153698-69-2P  
153698-70-5P 153840-05-2P 159293-87-5P 195706-49-1P  
195706-51-5P  
(pos.-working photoresist composition containing acid-decomposable dissoln.-inhibitor)
- IT 603-44-1D, Tris(p-hydroxyphenyl)methane, tetrahydropyranyl derivs.  
4466-18-6D, cumyloxycarbonylmethyl ethers 26505-28-2D, butoxycarbonylmethyl ethers 27955-94-8D, butoxycarbonylmethyl ethers 31171-18-3D, butoxycarbonylmethyl ethers 51866-54-7D, butoxycarbonyl derivs. 51866-62-7D, tetrahydropyranyl derivs. 110726-28-8D, derivs. 138089-25-5, 2,2-Bis(tert-butoxycarbonyloxyphenyl)propane 148452-55-5D, derivs. 148517-26-4D, tetrahydropyranyl derivs.  
195706-64-0 195706-66-2 195706-68-4 195706-70-8 195706-72-0  
195706-74-2 195706-76-4 195706-78-6 195706-80-0  
195706-83-3 195706-85-5 195706-87-7  
(pos.-working photoresist composition containing acid-decomposable dissoln.-inhibitor)

L50 ANSWER 45 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:320953 HCAPLUS Full-text

DOCUMENT NUMBER: 126:299685

ORIGINAL REFERENCE NO.: 126:57893a,57896a

TITLE: Positive-working photoresist composition and coating film

INVENTOR(S): Uenishi, Kazuya; Fujimori, Tooru; Kokubo, Tadayoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 55 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09062006	A	19970307	JP 1995-217593	19950825
PRIORITY APPLN. INFO.:			JP 1995-217593	19950825

ED Entered STN: 19 May 1997

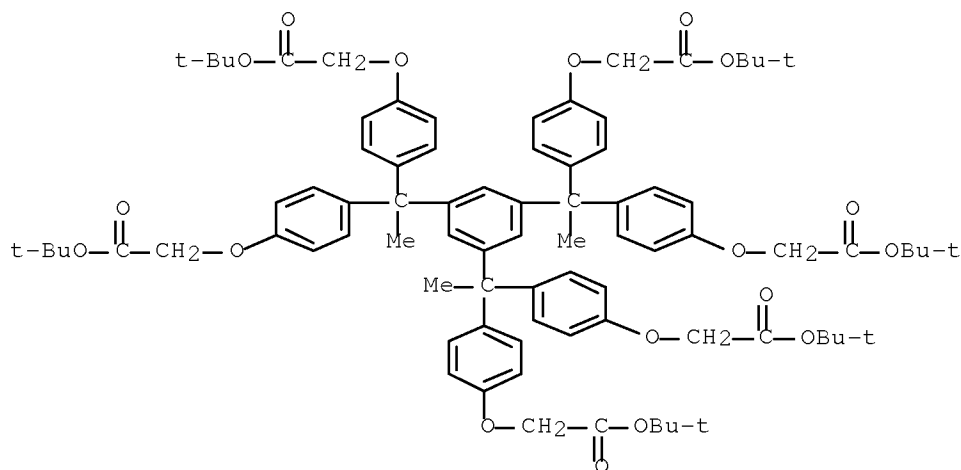
AB The title photoresist composition contains (1) an alkali-soluble resin, (2) a compound having  $\geq 1$  enol ether group CR<sub>1</sub>R<sub>2</sub>:CR<sub>3</sub>O [R<sub>1</sub>-3 = H, (substituted) alkyl, (substituted) cycloalkyl, (substituted) aryl, 2 of R<sub>1</sub>-3 may link to form a saturated or unsatd. ring], (3) an acidic group-containing compound, (d) an acid-decomposable group-containing low-mol.-weight compound with mol. weight  $\leq 3000$ , (4) a compound which is decomposed by irradiation with active rays or radiations to generate an acid, and (5) a solvent. A coating film, obtained by coating the composition on a substrate followed by heat-drying, is also claimed. The shrinkage upon baking and decrease in thickness upon development of the film of the composition are less, and the composition shows high photosensitivity and improved stability during storage after exposure and until baking and provides high resolution patterns with good profile.

IT 153698-65-8

(dissoln. inhibitor; photoresist composition containing enol-ether compound, acidic compound, and acid-decomposable compound)

RN 153698-65-8 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2''''',2''''''-[1,3,5-benzenetriyltris[ethylidenebis(4,1-phenyleneoxy)]]hexakis-, hexakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)





IC ICM G03F007-039  
 ICS G03F007-00; G03F007-004; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 IT 153698-63-6 153698-65-8 153698-69-2 189103-11-5  
 189103-12-6 189103-13-7 189103-14-8 189103-15-9  
 (dissoln. inhibitor; photoresist composition containing  
 enol-ether compound, acidic compound, and acid-decomposable compound)

L50 ANSWER 46 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1997:132516 HCAPLUS Full-text  
 DOCUMENT NUMBER: 126:150507  
 ORIGINAL REFERENCE NO.: 126:28997a,29000a  
 TITLE: Chemically amplified positive resist composition  
 INVENTOR(S): Yamanaka, Tsukasa; Aoai, Toshiaki; Fujimori, Toru  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 81 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
EP 747768	A2	19961211	EP 1996-109089	19960605
EP 747768	A3	19971112		
EP 747768	B1	20000913		
R: BE, DE, FR, GB				
JP 09054437	A	19970225	JP 1996-66665	19960322
US 5939234	A	19990817	US 1996-655233	19960605
PRIORITY APPLN. INFO.:			JP 1995-138295	A 19950605
			JP 1996-66665	A 19960322

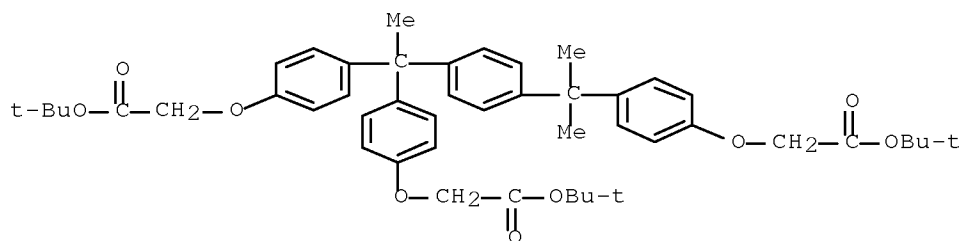
ED Entered STN: 28 Feb 1997

AB Disclosed is a chemical amplified pos. resist composition which comprises (A) a compound which contains at least one group selected from tert-alkyl ester groups and tert-alkyl carbonate groups and is capable of increasing solubility of the compound in an alkali aqueous solution by the action of an acid, (B) a compound which contains at least one group selected from acetal groups and silyl ether groups and is capable of increasing solubility of the compound in an alkali aqueous solution by the action of an acid, (C) a compound which is capable of generating an acid by irradiation with an active ray or radiation, and (D) an organic basic compound. The resist composition has high resolving power and forms a satisfactory pattern free from undergoing sensitivity decrease, T-top formation, and change in line width which are caused by post exposure bake.

IT 153698-54-5  
 (resin dissoln. inhibitor for chemical amplified pos.  
 photoresist compns.)

RN 153698-54-5 HCAPLUS

CN Acetic acid, 2,2'-[[1-[4-[1-[4-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl]-1-methylethyl]phenyl]ethylidene]bis(4,1-phenyleneoxy)]bis-, 1,1'-bis(1,1-dimethylethyl) ester (CA INDEX NAME)



IC ICM G03F007-004  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 IT 142952-62-3, p-Hydroxystyrene; p-(tert-butoxy-carbonylmethoxy)styrene copolymer 153698-54-5 153698-63-6 180337-31-9  
 181215-93-0, p-Hydroxystyrene; p-(tert-butoxy-1-methylethoxy)styrene copolymer 186493-32-3  
 (resin dissoln. inhibitor for chemical amplified pos. photoresist compns.)

L50 ANSWER 47 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:733520 HCAPLUS Full-text

DOCUMENT NUMBER: 125:342919

ORIGINAL REFERENCE NO.: 125:63825a,63828a

TITLE: Positive-working photoresist composition containing acid-decomposable dissolution inhibitors and naphthoquinonediazide-type dissolution inhibitors

INVENTOR(S): Uenishi, Kazuya; Momota, Atsushi; Aoso, Toshiaki; Kokubo, Tadayoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 47 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 08220749	A	19960830	JP 1995-29872	19950217
PRIORITY APPLN. INFO.:			JP 1995-29872	19950217

ED Entered STN: 13 Dec 1996

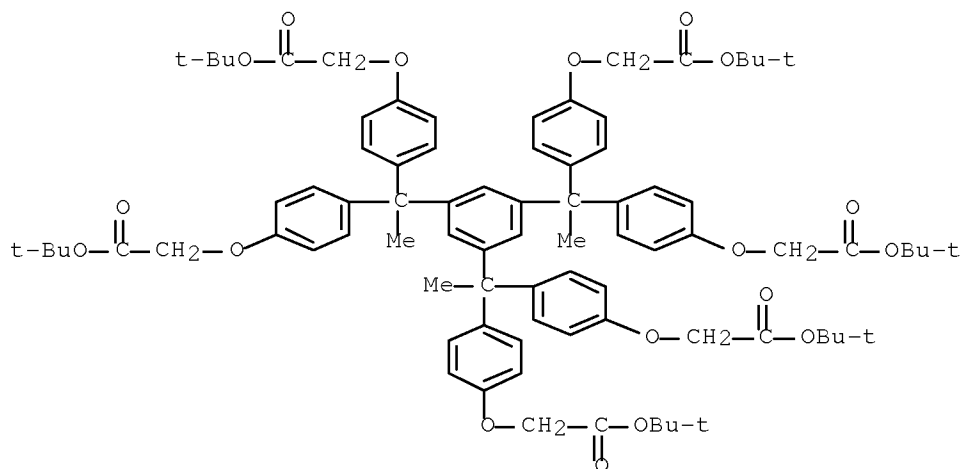
AB The composition contains (A) an alkali-soluble resin, (B) 1,2-naphthoquinonediazide-(5 and/or 4)-sulfonic acid esters, (C) a low-mol.-weight compound with mol. weight  $\leq 3000$  having acid-decomposable group selected from tert-alkyl ester group, tert-alkyl carbonate group, cumyl ester group, tetrahydropyranyl ether group, and (D) a photoacid generator. Contents of components B and C preferably satisfy the following relations:  $5 \text{ weight\%} \leq (B + C) \leq 70 \text{ weight\%}$  and  $30 \text{ weight\%} \leq [100B/(B + C)] \leq 95 \text{ weight\%}$ . The photoresist composition shows good dimensional reproducibility, wide developing latitude, heat resistance, and little dependence on film thickness. 1,3,5-Tris[4-(tert-butoxycarbonyloxy)- $\alpha,\alpha$ -dimethylbenzyl]benzene was prepared and used as an acid-decomposable dissoln. inhibitor for the composition

IT 153698-65-8P  
 (pos.-working photoresist composition containing

acid-decomposable dissoln. inhibitors and  
naphthoquinonediazide-type dissoln. inhibitors)

RN 153698-65-8 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2''''',2''''''-[1,3,5-benzenetriyltris[ethylidenebis(4,1-phenyleneoxy)]]hexakis-, hexakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



IC ICM G03F007-022

ICS G03F007-004; G03F007-039

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 126776-83-8P 153698-58-9P 153698-63-6P 153698-65-8P  
153698-68-1P 153698-69-2P 153698-70-5P 153840-05-2P  
159293-87-5P 171484-63-2P 174175-82-7P 174588-47-7P  
180258-33-7P

(pos.-working photoresist composition containing  
acid-decomposable dissoln. inhibitors and  
naphthoquinonediazide-type dissoln. inhibitors)

L50 ANSWER 48 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:543435 HCAPLUS Full-text

DOCUMENT NUMBER: 122:278147

ORIGINAL REFERENCE NO.: 122:50489a,50492a

TITLE: Positive-working high-resolution photoresist composition

INVENTOR(S): Aoso, Toshiaki; Yamanaka, Tsukasa; Kokubo, Tadayoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 67 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 06273924	A	19940930	JP 1993-82417	19930318
JP 3194645	B2	20010730		

ED Entered STN: 12 May 1995

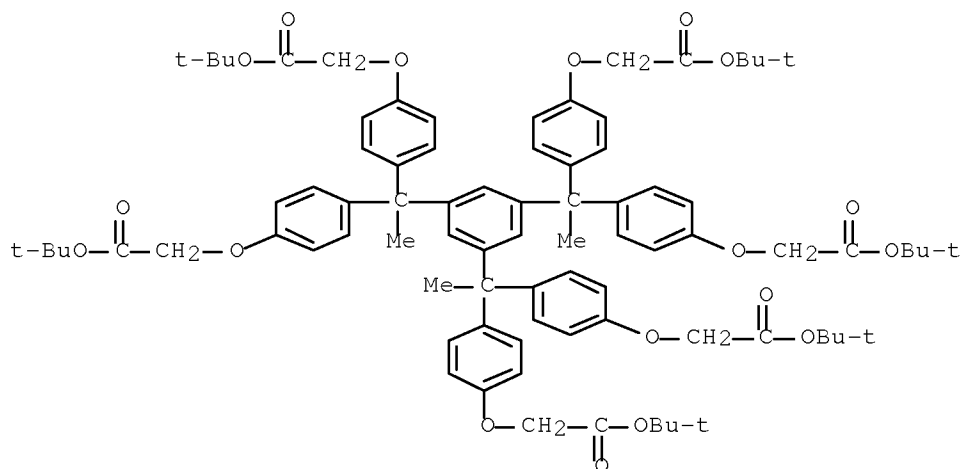
AB The title composition comprises: (1) a H<sub>2</sub>O-insol. and an alkaline aqueous solution-soluble resin; (2) a compound forming an acid as irradiated with an active ray; (3) an acid-decomposable dissoln. retarding compound with a mol. weight ≤3,000 whose solubility increase in an alkaline developer in the presence of an acid when heated to ≥70°; and (4) a compound whose solubility and hydrophilicity to the alkaline developer increases within ≤1 h at ≤50° due to reaction with (2). This photoresist composition is useful for fabricating a lithog. plate, an integrated circuit, etc.

IT 153698-65-8F

(pos.-working high-resolution photoresist composition)

RN 153698-65-8 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2''''',2''''''-[1,3,5-benzenetriyltris[ethylidenebis(4,1-phenyleneoxy)]]hexakis-, hexakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

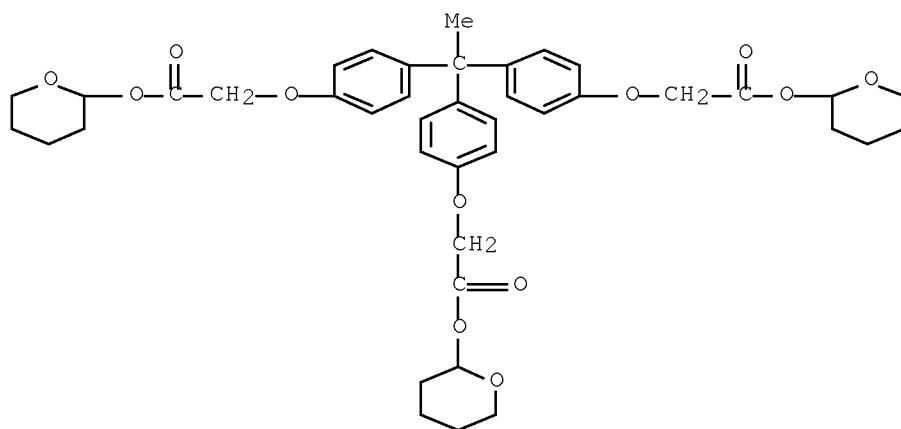


IT 162957-84-8

(pos.-working high-resolution photoresist composition)

RN 162957-84-8 HCAPLUS

CN Acetic acid, 2,2',2''-[ethylidynetris(4,1-phenyleneoxy)]tris-, tris(tetrahydro-2H-pyran-2-yl) ester (9CI) (CA INDEX NAME)



IC ICM G03F007-004  
 ICS G03F007-00; G03F007-029; G03F007-039; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 IT 27029-76-1P, m-Cresol-p-cresol-formaldehyde copolymer 112504-03-7P  
 114651-28-4P 153698-58-9P 153698-65-8P 153698-69-2P  
 153698-70-5P 159293-87-5P  
 (pos.-working high-resolution photoresist composition)  
 IT 2426-02-0 5255-75-4 7561-01-5 23358-99-8 24979-70-2,  
 p-Hydroxystyrene homopolymer 38614-07-2 57840-38-7 57900-42-2  
 62613-15-4 66003-78-9 80998-40-9 104256-00-0 104912-56-3  
 124737-97-9 136881-55-5 142096-70-6 151587-15-4 153698-46-5  
 153698-66-9 153698-67-0 162957-79-1 162957-80-4 162957-81-5  
 162957-82-6 162957-83-7 162957-84-8  
 (pos.-working high-resolution photoresist composition)

L50 ANSWER 49 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:522641 HCAPLUS [Full-text](#)  
 DOCUMENT NUMBER: 122:278146  
 ORIGINAL REFERENCE NO.: 122:50489a,50492a  
 TITLE: Positive-working photoresist composition with  
 durability, high sensitivity, and high resolution  
 INVENTOR(S): Aoso, Toshiaki; Yamanaka, Tsukasa; Kokubo,  
 Tadayoshi  
 PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 06266109	A	19940922	JP 1993-54121	19930315
PRIORITY APPLN. INFO.:			JP 1993-54121	19930315

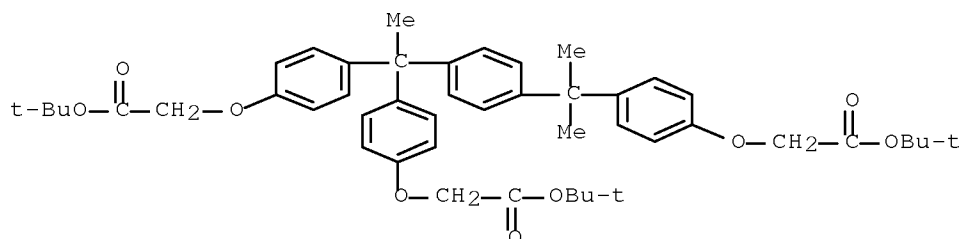
ED Entered STN: 04 May 1995  
 AB The title composition comprises a solvent with b.p. 130-155° and a dissoln.  
 inhibitor having ≥2 groups capable of dissoln. upon reaction with an acid.  
 IT 153698-54-5

10/594,282

(pos.-working photoresist composition with durability, high sensitivity, and high resolution)

RN 153698-54-5 HCAPLUS

CN Acetic acid, 2,2'-[[1-[4-[1-[4-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl]-1-methylethyl]phenyl]ethylidene]bis(4,1-phenyleneoxy)]bis-, 1,1'-bis(1,1-dimethylethyl) ester (CA INDEX NAME)

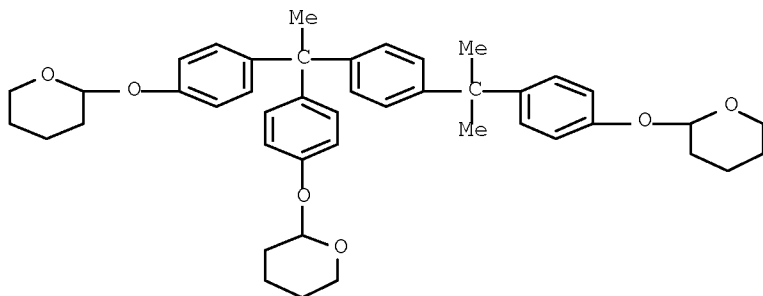


IT 153698-53-4P 153698-65-8P

(pos.-working photoresist composition with durability, high sensitivity, and high resolution)

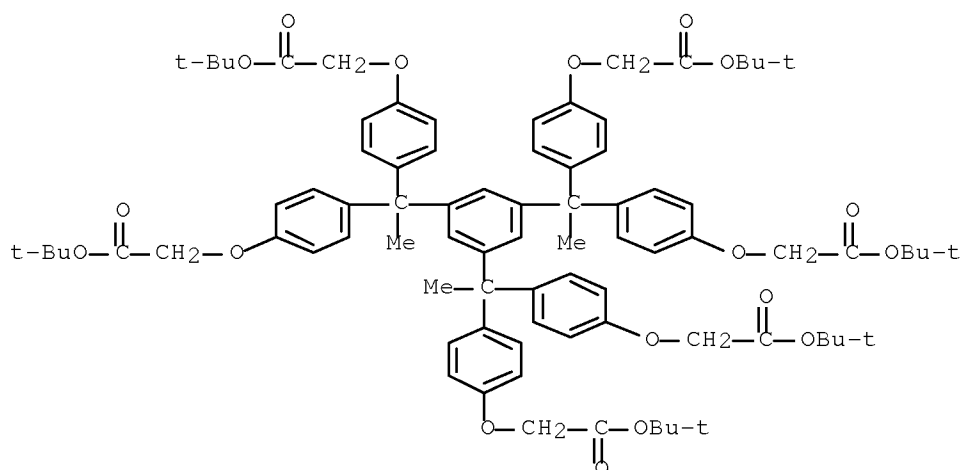
RN 153698-53-4 HCAPLUS

CN 2H-Pyran, 2,2'-[[1-[4-[1-methyl-1-[4-[(tetrahydro-2H-pyran-2-yl)oxy]phenyl]ethyl]phenyl]ethylidene]bis(4,1-phenyleneoxy)]bis[tetrahydro- (CA INDEX NAME)



RN 153698-65-8 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2'''',2'''--[1,3,5-benzenetriyltris[ethylidenebis(4,1-phenyleneoxy)]]hexakis-, hexakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



IC ICM G03F007-039  
ICS G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 76

IT Lithography  
(photo-, submicron, pos.-working photoresist composition with durability, high sensitivity, and high resolution)

IT 153698-48-7 153698-50-1 153698-51-2 153698-52-3  
153698-54-5 153698-55-6 153698-56-7 153698-57-8  
153698-62-5 153698-63-6 153840-05-2 159293-88-6 162744-66-3  
(pos.-working photoresist composition with durability, high sensitivity, and high resolution)

IT 153698-53-4P 153698-58-9P 153698-65-8P  
161715-12-4P  
(pos.-working photoresist composition with durability, high sensitivity, and high resolution)

L50 ANSWER 50 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1994:204700 HCAPLUS Full-text

DOCUMENT NUMBER: 120:204700

ORIGINAL REFERENCE NO.: 120:36019a,36022a

TITLE: Positive-type light-sensitive composition

INVENTOR(S): Yamanaka, Tsukasa; Aoai, Toshiaki; Uenichi, Kazuya; Kondo, Shunichi; Kokubo, Tadayoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 81 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 541112	A1	19930512	EP 1992-119043	19921106
EP 541112	B1	20010905		
R: BE, DE, FR, GB				
JP 06051519	A	19940225	JP 1992-299093	19921013
PRIORITY APPLN. INFO.:			JP 1991-319600	A 19911108

JP 1992-47705	A	19920205
JP 1992-47782	A	19920205
JP 1992-166685	A	19920603
JP 1992-299093	A	19921013

OTHER SOURCE(S): MARPAT 120:204700

ED Entered STN: 16 Apr 1994

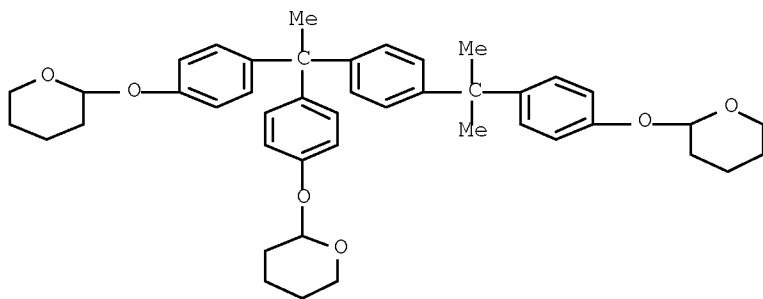
AB A pos.-type light-sensitive composition useful in manufacture of a lithog. plate or a semiconductor device and having less layer shrinkage by baking after exposing, less layer decrease in developing, a good profile, and a high resolution comprises (a) a resin which is insol. in water and soluble in an alkaline aqueous solution, (b) a compound which generates an acid by irradiation with active rays or radial rays, and (c) an acid-decomposable dissoln. inhibitor, having a mol. weight of not more than 3000 and having groups decomposable by the action of the generated acid to increase the solubility of said inhibitor in an alkaline developing solution, wherein said inhibitor (c) is at least one compound selected from the group consisting of (i) compds. having two of said acid decomposable groups which are separated by 10 or more bonded atoms excluding the atoms constituting the acid decomposable groups and (ii) compds. having at least three of said acid decomposable groups and two of said groups which are at the farthest positions are separated by 9 or more bonded atoms excluding the atoms constituting the acid decomposable groups.

IT 153698-53-4 153698-54-5 153698-64-7  
153698-65-8

(pos. photoresist compns. containing alkali-soluble resins, photosensitive acid generators and, for lithog. plate and semiconductor device manufacture)

RN 153698-53-4 HCAPLUS

CN 2H-Pyran, 2,2'-[[1-[4-[1-methyl-1-[4-[(tetrahydro-2H-pyran-2-yl)oxy]phenyl]ethyl]phenyl]ethylidene]bis(4,1-phenyleneoxy)]]bis[tetrahydro- (CA INDEX NAME)

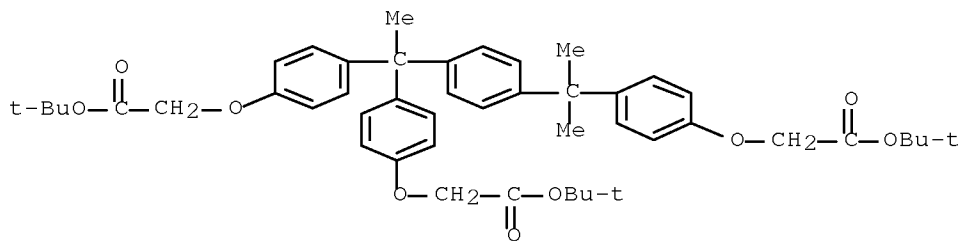


RN 153698-54-5 HCAPLUS

CN Acetic acid, 2,2'-[[1-[4-[1-[4-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl]-1-methylethyl]phenyl]ethylidene]bis(4,1-phenyleneoxy)]]bis-, 1,1'-bis(1,1-dimethylethyl) ester (CA INDEX NAME)

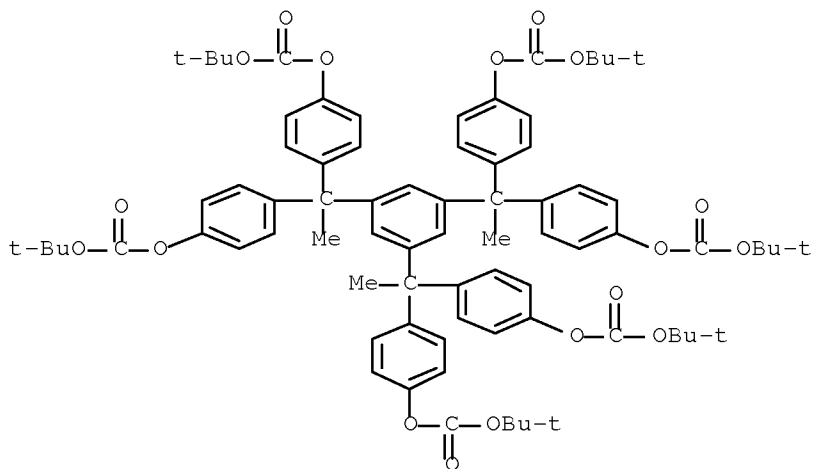


10/594,282



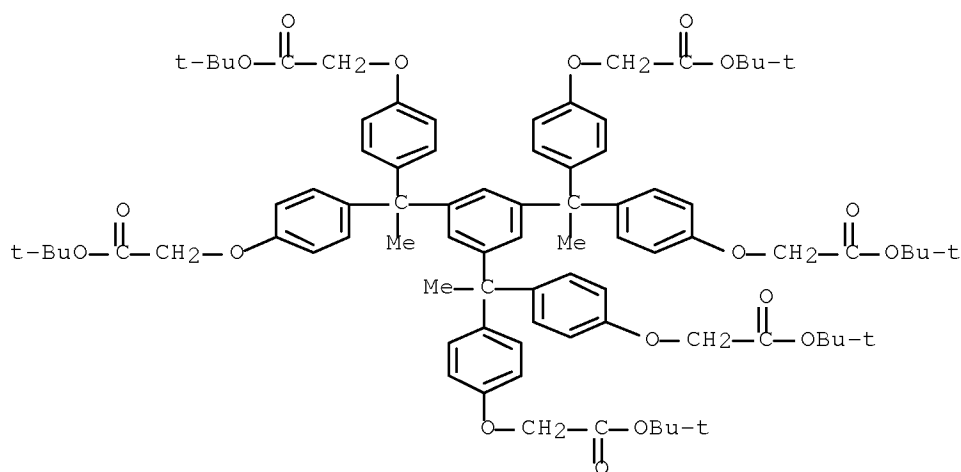
RN 153698-64-7 HCAPLUS

CN Carbonic acid, C,C',C'',C''',C'''',C'''''-[1,3,5-benzenetriyltris(ethylidenedi-4,1-phenylene)] C,C',C'',C''',C'''',C'''''-hexakis(1,1-dimethylethyl) ester (CA INDEX NAME)



RN 153698-65-8 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2'''',2'''--[1,3,5-benzenetriyltris[ethylidenebis(4,1-phenyleneoxy)]]hexakis-, hexakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



- IC ICM G03F007-004
- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST pos photosensitive compn lithog plate; acid generator pos photosensitive compn
- IT Lithographic plates  
Semiconductor devices  
(manufacture of, pos. photoresist compns. containing photosensitive acid generators, alkali-soluble resins, and acid-decomposable dissoln. inhibitors for)
- IT Phenolic resins, uses  
(novolak, pos. photoresist compns. containing photosensitive acid generators, acid-decomposable dissoln. inhibitors and, for lithog. plate and semiconductor device manufacture)
- IT 57900-42-2 59626-75-4 62613-15-4 66003-78-9 124737-97-9  
142096-70-6 153698-46-5 153698-66-9 153698-67-0  
(pos. photoresist composition containing alkali-soluble resins, acid-decomposable dissoln. inhibitors and, for lithog. plate and semiconductor device manufacture)
- IT 152238-74-9 153698-48-7 153698-49-8 153698-50-1 153698-51-2  
153698-52-3 153698-53-4 153698-54-5 153698-55-6  
153698-56-7 153698-57-8 153698-58-9 153698-59-0 153698-60-3  
153698-61-4 153698-62-5 153698-63-6 153698-64-7  
153698-65-8 153840-05-2  
(pos. photoresist compns. containing alkali-soluble resins, photosensitive acid generators and, for lithog. plate and semiconductor device manufacture)
- IT 24979-70-2, Poly(p-hydroxystyrene) 27029-76-1,  
m-Cresol-p-cresol-formaldehyde copolymer 112504-03-7 123236-78-2  
(pos. photoresist compns. containing photosensitive acid generators, acid-decomposable dissoln. inhibitors and, for lithog. plate and semiconductor device manufacture)

L50 ANSWER 51 OF 51 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1992:140130 HCAPLUS Full-text

DOCUMENT NUMBER: 116:140130

ORIGINAL REFERENCE NO.: 116:23503a, 23506a

TITLE: Positive-type photoresist composition

INVENTOR(S): Kawabe, Yasumasa; Uenishi, Kazuya; Tan, Shiro

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 34 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 445819	A2	19910911	EP 1991-103511	19910307
EP 445819	A3	19911211		
EP 445819	B1	20010822		
R: DE, GB				
JP 03259149	A	19911119	JP 1990-57658	19900308
JP 03279958	A	19911211	JP 1990-80028	19900328
JP 03279959	A	19911211	JP 1990-80029	19900328
PRIORITY APPLN. INFO.:			JP 1990-57658	A 19900308
			JP 1990-80028	A 19900328
			JP 1990-80029	A 19900328

OTHER SOURCE(S): MARPAT 116:140130

ED Entered STN: 03 Apr 1992

GI For diagram(s), see printed CA Issue.

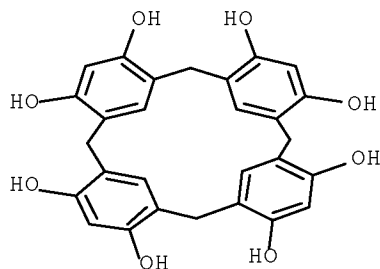
AB The title composition comprises a quinonediazide compound, an alkali-soluble resin, and  $\geq 1$  additive from (1) RXRXR [R = Q; X = lower alkyl; R1 = H, halogen, alkyl, alkoxy, alkenyl, alkoxy carbonyl, alkyloxy, acryl; m = 1-3; n = 2-4], (2) I [R4-R6 = OH, alkyl, alkoxy, halogen; others are same as before], (3) RZ1R [III; R = Q; R1 = H, halogen, carboxyl, alkyl, aryl, aralkyl, alkoxy, acyl, alkoxy carbonyl, alkyloxy, aryloxy, CN, NO2; Z = CR12R13, CO2, COYCO, CO2ZO2C, alkylene; Y = alkylene, an aromatic group; Z = alkylene, oxyalkylene; R12, R13 = alkyl, aryl, acyl, aralkyl, OH etc.; m = 1-3; n = 1-4; m + n = 5], (4) III [R1 = same as in II except carboxyl; R15, R16 = H, alkyl, aryl; g = 3-8; Y = a single bond, OCH2, m = 1-3; m + n = 4], (5) IV [R1 = same as in II, amino, hydrocarbylamino etc.; R19, R20 = H, alkyl; m, n = 1-3], and (6) V [R22 = R; R23 = H, OH, OR25, O2CR22; R1 = same as in II; R25 = R1; m, n = 1-3; m + n = 4; for R22, m + n = 5]. The photoresist composition exhibits excellent sensitivity, resolution, and developability.

IT 125748-07-4

(pos. photoresist compns. containing)

RN 125748-07-4 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacos-  
 1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-  
 4,6,10,12,16,18,22,24-octol (CA INDEX NAME)



IC ICM G03F007-022  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
IT 500-38-9 1143-72-2 24582-50-1 93933-64-3 99353-03-4  
125748-07-4 128197-51-3,  
1,1-(5,5'-Diacetyl-2,3,4,2',3',4'-hexahydroxy)diphenylethane  
132757-08-5 139545-12-3 139545-13-4 139545-14-5 139545-15-6  
139545-16-7 139545-17-8 139545-18-9 139545-19-0  
(pos. photoresist comps. containing)

=> d his nofile

(FILE 'HOME' ENTERED AT 13:24:28 ON 29 OCT 2008)

FILE 'HCAPLUS' ENTERED AT 13:29:00 ON 29 OCT 2008

L1 1 SEA ABB=ON PLU=ON US20070190451/PN  
SEL RN

FILE 'REGISTRY' ENTERED AT 13:29:14 ON 29 OCT 2008

L2 7 SEA ABB=ON PLU=ON (125748-07-4/BI OR 108-46-3/BI OR  
280-57-9/BI OR 5292-43-3/BI OR 625122-37-4/BI OR 66003-78-9  
/BI OR 75-07-0/BI)  
L3 1 SEA ABB=ON PLU=ON L2 AND C28 H24 O8/MF  
L4 STR 125748-07-4  
L5 50 SEA SSS SAM L4  
L6 STR L4  
L7 50 SEA SSS SAM L6  
L8 STR L6  
L9 50 SEA SSS SAM L8  
L10 STR L8  
L11 50 SEA SSS SAM L10  
L12 163571 SEA SSS FUL L10  
L13 2 SEA ABB=ON PLU=ON L12 AND L2  
SAV L12 LEE282/A

FILE 'HCAPLUS' ENTERED AT 14:26:49 ON 29 OCT 2008

L14 40515 SEA ABB=ON PLU=ON L12  
L15 2752 SEA ABB=ON PLU=ON L14 AND (PHOTORESIST? OR PHOTO  
RESIST?)

FILE 'REGISTRY' ENTERED AT 14:36:27 ON 29 OCT 2008

L16 STR  
L17 50 SEA SUB=L12 SSS SAM L16  
L18 22654 SEA SUB=L12 SSS FUL L16  
SAV L18 TEMP LEE282A/A  
L19 21621 SEA ABB=ON PLU=ON L18 NOT M/ELS  
L20 20976 SEA ABB=ON PLU=ON L19 NOT P/ELS  
L21 7461 SEA ABB=ON PLU=ON L20 NOT N/ELS  
L22 449 SEA ABB=ON PLU=ON L21 AND SI/ELS  
L23 7012 SEA ABB=ON PLU=ON L21 NOT L22

FILE 'HCAPLUS' ENTERED AT 14:49:27 ON 29 OCT 2008

L24 5505 SEA ABB=ON PLU=ON L23  
L25 82 SEA ABB=ON PLU=ON L13  
L26 36 SEA ABB=ON PLU=ON L25 AND ?RESIST?  
L27 766 SEA ABB=ON PLU=ON L24(L) (PHOTORESIST? OR PHOTO RESIST?)  
L28 244 SEA ABB=ON PLU=ON L27 AND (ULTRAVIOLET? OR ULTRA VIOLET?  
OR UV OR U VIOLET? OR UVIOLET?)  
L29 405 SEA ABB=ON PLU=ON L24(L) (PHOTORESIST? OR PHOTO RESIST?) (3  
A) (COMPOSITION? OR FORMULATION? OR MIXTURE?)  
E ELECTRON BEAM RESISTS/CT  
L30 4216 SEA ABB=ON PLU=ON "ELECTRON BEAM RESISTS"+PFT,NT/CT  
L31 2 SEA ABB=ON PLU=ON L29 AND L30  
L32 2 SEA ABB=ON PLU=ON L29 AND ELECTRON BEAM RESIST?  
L33 0 SEA ABB=ON PLU=ON L29 AND RADIATION RESIST?  
L34 0 SEA ABB=ON PLU=ON L29 AND PHOTOG//SC  
L35 395 SEA ABB=ON PLU=ON L29 AND PHOTOG?/SC

10/594,282

FILE 'REGISTRY' ENTERED AT 14:58:50 ON 29 OCT 2008

L36 STR L10  
L37 2 SEA SUB=L12 SSS SAM L36  
L38 STR L36  
L39 STR L36  
L40 6 SEA SUB=L12 SSS SAM L39  
L41 791 SEA SUB=L12 SSS FUL L39

FILE 'HCAPLUS' ENTERED AT 15:12:42 ON 29 OCT 2008

L42 506 SEA ABB=ON PLU=ON L41  
L43 32 SEA ABB=ON PLU=ON L42 AND L29  
L44 20 SEA ABB=ON PLU=ON L25 AND (PHOTORESIST? OR PHOTO  
RESIST?) (3A) (COMPOSITION? OR FORMULATION? OR MIXTURE?)  
L45 1 SEA ABB=ON PLU=ON L44 AND RADIATION RESIST?  
L46 0 SEA ABB=ON PLU=ON L43 AND RADIATION RESIST?  
L47 51 SEA ABB=ON PLU=ON (L43 OR L44 OR L45 OR L46)  
L48 10 SEA ABB=ON PLU=ON L47 AND (ULTRAVIOLET? OR ULTRA VIOLET?  
OR UV OR U VIOLET? OR UVIOLET?)  
L49 15 SEA ABB=ON PLU=ON L47 AND LITHOG?  
L50 51 SEA ABB=ON PLU=ON (L47 OR L48 OR L49)